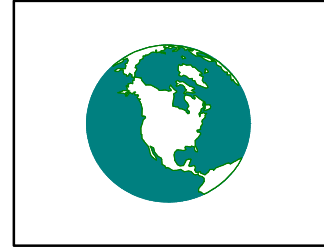


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CAR LINES

ISSUE 2006 - 5

OCTOBER 2006

Air Quality Standards and Guidelines for Particulate

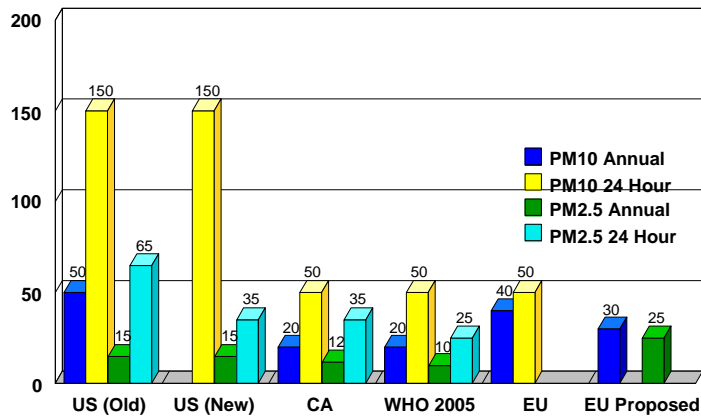


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EUROPE

1. EU Parliament Supports 'Euro 5' & Euro 6 Standards For Autos

On September 13th, the European Parliament's Environment Committee approved European Commission proposals to tighten vehicle emission standards, but voted for longer transition periods before the new rules take effect. The new rules must now be approved by the full Parliament and by the European Council.

The proposed new limits, known as Euro 5, will cut the standard for particulate matter in diesel car exhaust by 80 percent to 5 milligrams per kilometer; will lower limits for nitrogen oxides to 180 mg/km for diesel cars and 70 mg/km for petrol cars; and will lower the limit for hydrocarbons to 75 mg/km.

The Commission initially proposed that new limits would take effect from mid-2008, but the committee voted to insert amendments into the legislative text moving the earliest implementation date to 2009.

Under the amendments, contained in a report by German Socialist Matthias Groote, the Euro 5 standards should apply to private cars from June 1, 2009, and to larger vehicles (maximum laden weight of more than 2,500 kilograms) and light commercial vehicles from June 1, 2010.

The committee also called for tighter standards, dubbed "Euro 6," to be introduced five years after Euro 5. Euro 6 NOx limits will be 70 mg/km for both petrol and diesel fueled vehicles.

These should be introduced because "further reductions in the limit values are both necessary and technically feasible," Groote said in his report, adding that the Commission's initial proposal displayed "lack of ambition."

The committee also voted to oblige automakers to make vehicle repair information available to parties other than their authorized dealers and repair shops, and to make training manuals available to independent repairers.

2. EU States Criticize Commission On 'Weak' Measures to Combat Emissions

On September 22nd, several EU member states accused the European Commission of failing in its strategy to cut air pollution, in particular auto emissions. Environment ministers from Belgium and Denmark criticized the Commission for lack of ambition, while Germany's Environment Ministry said it will consider issuing proposals to force automakers to cut carbon dioxide emissions when Germany takes over the EU's rotating six-month presidency at the beginning of 2007.

The comments were made at a conference organized by the European Environmental Bureau, a coalition of European environmental organizations, and were directed at three separate Commission air quality initiatives: voluntary agreements with automakers to

reduce carbon dioxide, the Euro 5 auto emission standards, and the Thematic Strategy on Air Pollution.

Referring to voluntary agreements with the auto industry, Danish Environment Minister Connie Hedegaard said the approach "has not worked that well." Hedegaard advocated regulation, saying "we may have to move from a carrot to a stick approach."

Karsten Sach, head of international affairs at Germany's Environment Ministry, said Germany would look during its EU presidency at "regulation and standards if voluntary agreements are not adhered to."

Germany will take over the six-month rotating EU presidency from Finland in January.

Hedegaard also called for the Euro 6 vehicle emission standards to be brought forward, saying, "I don't understand the arguments that we should wait."

Hedegaard's criticisms were backed up by her Belgian counterpart, Bruno Tobback, who said Commission Vice President Günter Verheugen has resisted stronger action on vehicle emissions. Tobback said the Commission had failed to give member states tools such as regulatory powers to meet air quality targets.

3. Russia Planning New Motor Fuel Taxes To Begin in 2008

The Economic Development and Trade Ministry is planning to bring in new motor fuel taxes from 2008, Vedomosti has reported, and with a method of categorizing fuels that one analyst said would keep refining margins high. Vedomosti said the ministry planned to submit the bill to the government by the end of the year and that it hoped it would pass through the parliament in the spring of next year in order to become law in 2008.

The new rules would bring in four tax rates for gasoline and diesel based on their sulfur, benzene, aromatics and lead content, as well as octane level.

The ministry wants to ban fuels in the lowest-quality class in 2009 and the second-lowest in 2010.

4. EU Publishes Annual Report On CO2 Emissions From New Cars

CO2 emissions from new cars in the EU-15 were down by 12.4% from 1995 through 2004, according to the European Commission's annual report on CO2 emissions from new cars. However, the annual emission reduction rates have to be increased substantially if car manufacturers are to meet their 2008/9 CO2 emission target of 140 g/km.

In 2004, the average specific new car fleet CO2 emissions were 161 g CO2/km for ACEA (EU manufacturers), which remains the frontrunner, 168 g CO2/km for KAMA (Korean manufacturers), and 170 g CO2/km for JAMA (Japanese manufacturers). Compared to 1995, the average specific CO2 emissions have been reduced by 24 g CO2/km or 13% for ACEA, 26 g CO2/km or 13.3% for JAMA, and 29 g CO2/km or 14.7 % for KAMA.

Compared to 2003 all three associations reduced, in 2004, their average specific CO2 emissions: ACEA by 1.2%, JAMA by 1.2% and KAMA by 6.1%.

In order to meet the final target of 140 g CO2/km the average annual reduction rates of all three associations need to be increased. In the years remaining until 2008/9 the annual reduction rates must now reach an average of 3.3% for ACEA, 3.5% for JAMA and 3.3% for KAMA. It was anticipated from the beginning that the average reduction rates would be higher in the later years. However, the gaps to be closed, expressed in required annual performance, have further increased in 2004. This is a cause of concern, noted the Commission.

Commission Vice-President and Commissioner for Enterprise and Industry Günter Verheugen said: "Car manufacturers have made continuous and substantial progress since 1995. The situation is not satisfactory. I urge industry to step up their efforts. We expect that industry sticks to its commitments."

The Commission emphasized that if industry did not honor its commitments, the Commission would have to consider taking measures, including legislative ones, to ensure that the necessary CO2 reductions were achieved (see below).

The EU strategy to reduce CO2 emissions from cars rests on three pillars. The most important of these consists of separate voluntary commitments by the European, Japanese and Korean car manufacturers' associations to reduce CO2 emissions from their cars to an average of 140 g/km by 2008 (for European manufacturers) and 2009 (for Japanese and Korean producers). The other two pillars of the strategy are consumer information (chiefly through fuel efficiency labeling of cars) and fiscal measures to promote the most fuel-efficient cars.

The commitments by European, Japanese and Korean manufacturers are an important measure to help the EU-15 reach its Kyoto Protocol target of cutting greenhouse gas emissions to 8% below 1990 levels by 2012. Cars are responsible for more than 10% of EU CO2 emissions. CO2 emissions from road transport have risen by 22% since 1990, notably due to increases both in the number of cars on the roads and in the distances that are driven annually.

The Commission is also reviewing the options available to further reduce CO2 emissions from light-duty vehicles in the EU-25. The revised strategy will be based on an integrated approach to reduce CO2 emissions from cars, involving various stakeholders and extending, amongst others, to car technology, fuels, infrastructure and driver behavior.

5. EU Commission Threatens Automakers if Carbon Targets Not Met

On August 29th, the European Commission warned automakers that it will legislate to reduce vehicle carbon dioxide emissions unless the industry meets voluntary targets. Commission spokesman Gregor Kreuzhuber told reporters on the release of the figures, "Quite some progress has been made, but the European Commission feels the current situation is by no means satisfactory. We urge carmakers to step up their efforts."

The European, Japanese, and Korean car manufacturers' associations agreed in the late 1990s to cut average carbon dioxide output from new cars to 140 grams per kilometer by

2008 for European automakers and 2009 for Japanese and Korean automakers. The new figures, which relate to 2004, show that even for the best performing manufacturing group a further 13 percent reduction will have to be achieved to meet the target.

Campaign groups expressed doubt that industry can meet the targets. The European Federation for Transport and Environment said in a statement that automakers would need to achieve "three or four times the rate of reduction achieved in previous years."

Kreuzhuber said the voluntary targets were "ambitious but perfectly feasible," adding that the Commission is "motivating [automakers] to achieve the objectives," but would "not hesitate to replace the carrot with the stick," which could include legislation.

Representing industry, Sigrid de Vries, communications director of the European Automobile Manufacturers' Association, said the targets were not the only issue in reducing vehicle carbon emissions. She said that policy measures were needed to create more demand for cleaner cars, and that some complementary Commission measures "have not been very coherent." She said, for example, that safety requirements have required vehicles to be heavier and less carbon-efficient.

"We have achieved a lot already and will stick to the commitment, but we cannot speculate on what will happen by 2008," de Vries said.

6. Former Ministers Call For "Serious And Legally Binding" Standards

Europe's car industry is failing to meet its pledge to cut carbon emissions from new vehicles and must be set "serious and legally binding" fuel efficiency standards to improve their performance, nine former EU environment ministers have declared. Meeting in the council of ministers over a decade ago, the former ministers were involved in setting the target to reduce carbon dioxide emissions from cars to 120 grams per kilometer (g/km) by 2012. The European commission then negotiated a voluntary deal with carmakers to reach it.

In a letter to the Financial Times, the former ministers urged the current EU leadership to impose mandatory rules on carmakers to ensure that the target is met. The call reflects a growing belief that the industry will not fulfill an interim target of 140g/km by 2008/9.

At an event organized in Brussels on the same day by campaign group Transport and Environment, former French minister Corinne Lepage warned that short-term competitiveness concerns were obscuring the long-term vision set out by her and her colleagues.

But car industry representatives at the meeting complained that they were "caught between politicians and customers," with car-buyers unprepared to trade vehicle performance for environmental benefit. Industry association ACEA opposes binding fuel efficiency targets and instead wants harmonized EU car taxes linked to CO2 emissions to boost demand for fuel efficient vehicles.

The UK's transport ministry has launched a consultation on possible policy options to succeed the voluntary agreement. A ministry official told the meeting the UK wanted to

explore setting binding targets with the possibility of emissions trading between manufacturers.

In a related development the European Green Party called for a binding EU ceiling on CO2 emissions from road transport. After achieving the 120 g/km target in 2012 the ceiling should be lowered by 10 g/km every two years down to 80 g/km by 2020, it said. It also set out a manifesto for "soft mobility" aimed at reducing transport-related climate emissions through traffic reduction and a shift to renewable fuels.

The European commission also launched European mobility week 2006, with a focus on curbing the transport sector's contribution to climate change. The initiative will support the commission's climate change awareness-raising campaign.

7. Experts Urge EU To Tighten Air Pollution Standards

Experts have called on the European Union to toughen proposals on curbing two forms of air pollution linked to thousands of premature deaths per year. The joint appeal by air pollution scientists and respiratory doctors, attending major conferences in Paris and Munich, coincided with a European Parliament debate on the so-called CAFE directive on air quality.

CAFE focuses on tiny particles which can lodge in the throat and lungs and are increasingly associated with asthma, bronchitis, emphysema and cardiac stress.

If approved in its present form, CAFE would require the EU 25 nations to set binding limits of 30 micrograms per cubic meter for particles that measure less than 10 microns across. It also, for the first time in EU history, suggests -- but does not stipulate -- limits of 25 micrograms per cubic meter for fine particulate matter, whose particles measure 2.5 microns or less.

The experts' joint statement attacked the 10-micron proposals as badly weakening current regulations, criticizing the pollution limits; the time given to governments to enforce those limits; and a loophole that meant "natural" sources of particulates could be taken into account.

"As negotiations now stand, this proposal would mark a serious reduction in public health protection," said Bert Brunekreef, a professor of environmental epidemiology and director of the Institute for Risk Assessment Sciences in Utrecht, the Netherlands. "Thousands of premature deaths per year" could be the result, he said.

CAFE's provisions for 2.5-micron particulates were also savaged for allowing limits deemed to be too high and which in any case were not binding. The United States and Canada have already adopted curbs on this form of pollution.

The Paris conference gathered leading experts in pollution and epidemiology; the Munich conference was the annual congress of the European Respiratory Society (ERS).

A study presented in Paris calculated the number of premature deaths that would occur in 26 European countries if 2.5-micron particulates were limited to CAFE's 25 micrograms per cubic meter or, as in the United States, to 15 micrograms per cubic

meter. Under 25 micrograms, 4,500 lives would be saved annually; under US-style limits, 13,300 lives would be saved.

8. Draft Air Directive Further Weakened by Parliament

On September 26th, the European Parliament voted to water down a plan to reinforce EU air quality legislation, prompting a protest by Environment Commissioner Stavros Dimas. In a statement, Dimas attacked as "unacceptable" amendments introduced by Parliament that would extend beyond 2010 the deadline for compliance with limits on airborne concentrations of PM-10 (particulate matter measuring less than 10 micrometers in diameter).

Parliament also voted to weaken the current daily exposure limit on concentrations of PM-10 by allowing it to be exceeded on 55 days per year instead of 35.

Dimas complained, "People will be exposed to excessive pollution levels--and will therefore be running avoidable health risks--for a longer period." "Weakening the daily limit value for PM-10 means that people whose health is most affected by poor air quality may be exposed to higher pollution levels on significantly more days a year even if the annual limit value were to be lowered," Dimas added.

The amendments were introduced into a draft directive proposed by the European Commission that aims to streamline current air pollution legislation and introduce new restrictions on fine particulate matter.

In their preliminary "first reading" vote, lawmakers approved the directive by 494 votes to 126 with 17 abstentions.

The directive aims to give member states "more flexibility in meeting some of these [standards] in zones where they face difficulties," according to Dimas. The added flexibility also allows for the discounting of natural pollution sources when assessing compliance.

A key innovation, however, would introduce as of 2010 a limit on fine particulate matter by setting a level of 25 micrograms per cubic meter of air for particles less than 2.5 micrometers in diameter (PM_{2.5}). States would then be required to reduce exposure to PM_{2.5} by 20 percent between 2010 and 2020.

EU air quality standards for coarser PM-10 particles entered into force on Jan. 1, 2005. The daily limit is 50 [micro]g/m³ averaged over 24 hours. The daily limit can be exceeded on up to 35 days per year in order to take account of "unusual and adverse meteorological conditions."

According to the Commission, pollution from fine particles contributes to the premature deaths of 350,000 people across the European Union each year. Together with coarser PM-10 particles, the fine particles are considered among the most dangerous pollutants for human health because they can penetrate deeply into the respiratory system.

In his statement, Commissioner Dimas argued that air pollution is "shortening the life of every EU citizen by an average of eight months" and should be tackled "vigorously."

The contentious parliamentary amendments were supported by an alliance of center-right parties backed by lawmakers from the EU's newest member states in Central and Eastern Europe. Polish and Hungarian speakers complained about compliance costs after decades of environmental neglect by governments during the Communist era.

British Liberal Sarah Ludford noted that Parliament was, for the first time since the 1990s, being "less progressive" than ministers on an environmental issue.

Environmental activists in the Greens party attacked the vote as "a scandal."

9. EU Ministers Back Commission On Proposed Air Quality Directive

European Union environment ministers meeting in Luxembourg on October 23rd backed the European Commission proposals to impose a limit of 25 micrograms per cubic meter on concentrations of fine dust particles in ambient air. The ministers, meeting in the EU Environment Council, were discussing a proposed air quality directive (Proposal for a Directive of the European Parliament and of the Council on Ambient Air Quality and Cleaner Air for Europe [COM (2005) 447]). The proposal was put forward by the Commission as part of its thematic strategy on air pollution published last September.

The legislation would create for the first time at the EU level a legally binding limit for PM-2.5, or airborne particulate matter measuring less than 2.5 micrometers in diameter. It also would allow member states compliance extensions of up to three years in zones where particular difficulties are faced. The directive is due to come into force in 2015.

The directive also modifies existing limits on slightly coarser airborne particulate matter, PM-10. These limits came into force at the beginning of 2005, but the Commission's subsequent proposal asked for member states to be able to discount natural pollution sources when assessing compliance, and puts forward compliance extensions of five years in some cases.

Speaking to reporters after the Environment Council meeting, EU Environment Commissioner Stavros Dimas said the agreement marked "especially important progress." "I am glad to see the Council has endorsed fully both our approach and level of commitment," he said.

At the same time, however, the Commission criticized the European Parliament, which must decide on the new proposals jointly with member states. In a statement issued on October 23rd, the Commission noted that Parliament had called for less stringent limits for PM-10 and compliance extension periods of six rather than three years. The Commission said in its statement that it "cannot accept these changes because they weaken the existing level of health protection."

The legislation is due for a second reading in the European Parliament in the first part of 2007.

10. EU Parliament Approves Tax Incentives For Clean Cars

On September 5th, the European Parliament approved by a 385-139 vote a plan for a common, EU-wide automobile taxation system intended to give tax breaks to owners of less-polluting vehicles and to avoid double taxation. EU finance ministers will have the final word on the European Commission's plan, and EU tax proposals must secure unanimous backing from the Union's 25 national governments.

EU Taxation and Customs Commissioner Laszlo Kovacs warned the Parliament, "To date, the reaction from ministers has been mixed." Kovacs suggests a progressive tax on automobile use, rather than ownership, with the aim of reducing emissions, eliminating double taxation, and integrating the EU's fragmented automobile market

At present, 16 EU member states impose the heaviest burden of vehicle tax at the time of registration. The rate can represent a levy of up to 180 percent on the manufacturer's price. Other states levy an annual road tax, payable for as long as the vehicle remains in use. Thus, vehicle owners who move between states may incur double taxation.

Commending Kovacs's plan, a report by Parliament's Economic and Monetary Affairs Committee (EMAC) pointed to the United Kingdom, where a standard annual rate of road tax that applied to all types of automobile has been replaced by a scale of yearly charges weighted according to fuel type and carbon dioxide emissions. Most owners pay between £50 and £195 (\$95 and \$370) a year. Lawmakers called for an even more sophisticated scheme tied to fuel efficiency and overall pollution emissions rather than merely carbon dioxide emissions. However, parliamentary amendments to tax drafts are not binding.

According to Kovacs, divergent national tax regimes force up automobile production costs as makers compete to produce special models designed to minimize taxes in states such as Denmark, which had the highest registration tax at [Euros]16,000 (\$20,500) when the Commissioner unveiled its plan.

Kovacs suggests that by 2009 at least 25 percent of the total tax revenue from registration and annual circulation taxes should derive from the carbon-dioxide-based element of the taxes, rising to 50 percent by 2010.

In the Parliament's debate, lawmakers from states that impose heavy registration taxes argued that the system is the only practical way of discouraging car use, short of imposing punitive fuel taxes. But Finnish representative Henrik Lax said that registration tax in his country discourages purchase of new cars, "so in Finland, you'll encounter some of the oldest cars in Europe, many of them lacking airbags and other modern safety features."

A quarter of the EU's CO₂ emissions come from road transport, with half of this from passenger cars.

Under the plans, at least a quarter of the combined tax base should be based on CO₂ emissions by the end of 2008, rising to half by 2010, the commission says. The registration tax would be abolished over five to 10 years.

Britain and Ireland oppose because they fear it is a step to harmonizing car tax rates. Denmark is worried it will dent the 19 billion crowns in registration tax a year that it collects.

11. Royal Society Says Exxon Misleads on Climate Change

Britain's national academy of science, the Royal Society, has accused US oil giant Exxon Mobil Corp. of misleading the public into thinking that the role of humans in climate change is still open to doubt. Royal Society spokesman Bob Ward described Exxon's assessment of mankind's contribution to global warming as inaccurate and misleading in a letter to the company published by the Guardian newspaper on its Web site.

Ward objected to an Exxon Corporate Citizenship document that described "gaps in the science" of climate change, casting doubt on the link between global warming and the greenhouse gases which humans produce by burning fossil fuels. Exxon has said there were such gaps in the latest report of the United Nations' Intergovernmental Panel on Climate Change (IPCC), published in 2001, which had used the peer-reviewed academic papers of several hundred scientists. This report spoke of "new and stronger evidence" that human activities were warming the globe, a stronger stance than in its previous report in 1995.

"It's quite clear that what Exxon are publishing is not the IPCC (position)," said Ward. His letter to Exxon, referring to two company publications this year, said: "I am writing to express my disappointment at the inaccurate and misleading view of the science of climate change that these documents present."

Responding to the Royal Society's letter, Exxon said in a statement that it did accept the contribution of greenhouse gases such as carbon dioxide (CO₂) to climate change.

"Contrary to the Royal Society's assertion, Exxon Mobil recognizes ... CO₂ emissions are one of the contributing factors to climate change," it said.

"We refute any suggestion that our reports are inaccurate or misleading," it said, adding it had founded a climate and energy research program at California's Stanford University.

Ward said that at a July meeting with Exxon the oil company had pledged to him that it would stop funding lobby groups that misrepresented the consensus view on climate change science.

An Exxon spokesman reportedly denied it had agreed to stop any such funding, saying the company annually reviews its funding of organizations and is now in the midst of one such review. The review includes all charitable organizations it supports and is not in response to Royal Society pressure, but rather just part of its normal budgeting process, Exxon said.

According to Ward's own analysis of Exxon's Corporate Giving Report, the company last year funded 64 groups conducting climate change research, of which 25 were in line with mainstream climate science and 39 were "misleading." The latter category included the Center for the Study of Carbon Dioxide and Global Change, to which Exxon gave US\$25,000 in 2005, the Exxon website shows. The Center's Web site says: "There is no compelling reason to believe that the rise in temperature was caused by the rise in CO₂."

12. UK Minister Says Next US President Should Engage More on Climate

Britain's foreign secretary said the next U.S president should quickly get involved in global negotiations to slow global warming, which she warned was fast becoming a crucial foreign policy issue. "What I would like for the next administration to do is to engage fully in the international dialogue," Margaret Beckett told a meeting of Wall Street bankers at New York's Council on Foreign Relations.

In July, British Prime Minister Tony Blair, one of Washington's closest allies, bypassed the Bush administration and met with California Gov. Arnold Schwarzenegger to explore ways to link emissions trading between Britain and that state.

Beckett said global warming had already altered rainfall around the world, hitting crop yields and freshwater supplies. A shift in rainfall was a "major trigger for the tragic conflict in Darfur," she said. If sea levels rose in Bangladesh, "this would be bound to raise tensions in an already volatile region."

Beckett said it was unfortunate the European Union's Emissions Trading Scheme had not been replicated in the United States. "That is not a European idea, that's an American idea; we want more American ideas, more stimuli from America into this very important debate".

The EU trading plan is modeled loosely on a successful US program to cut output of sulfur dioxide gases from coal plants that cause smog. The EU program put carbon dioxide emissions limits on 11,000 power plants and businesses. Some US\$8.2 billion in credits for the right to emit carbon traded in the first year of the plan in 2005.

She said the next round of the Kyoto Protocol, slated to start in 2012, could look very different from the current model in which 39 developed countries are required to cut emissions and developing countries have no limits.

"I'm very conscious indeed with genuine concerns ... felt in the United States government and the ... feeling that the way the Kyoto Protocol agreement was put together was not satisfactory. But my argument is if you don't like the way the previous regime was shaped and you think it was full of flaws, then get involved with the next one and the earlier the better."

13. Diesel Car Sales Seen Peaking in Europe

Sales of diesel-powered vehicles may be peaking in Europe as stringent emissions laws push up prices, but the popularity of the engine is likely to increase in other parts of the world, auto industry executives said during the Paris auto show. Diesel engines now power about half of Europe's new cars, rising from a market penetration of about 32 percent in 2000. The vehicles cost about 2,000 euros (US\$2,500) more than gasoline-powered cars, but typically get 30 percent better mileage. But the price of the cars and the cost of producing them have been rising in Europe as automakers have to invest in advanced technology to meet stricter emissions standards for diesel engines, which have higher exhaust levels of nitrogen oxide (NOx).

"We see sales flattening out (in Europe), mainly driven by cost and cost of meeting new emissions standards," Roger Johansson, vice president of General Motors Corp.'s powertrain operations in Europe, stated to the press.

Dan Morris, Mazda Motor Corp's sales and marketing chief, said the fuel efficiency of diesel engines and its higher performance benefits should increase the popularity of the vehicles in other auto markets. "I think diesels have room to grow globally," Morris said on the sidelines of the Paris auto show.

Industry analysts also see the pace of growth of diesel engines in Europe slowing but sales gaining pace elsewhere. Global demand for diesel light vehicles is expected to nearly double over the next 10 years, increasing from 15 million sales in 2005 to 29 million in 2015, according to J.D. Power and Associates. The auto consulting and forecasting firm said in a recent study that share of diesel vehicles in Western Europe is expected to peak at below 60 percent of the new vehicle market.

"South Korea and India are key markets for diesel growth in Asia and the market in China is continuously developing," Alastair Bedwell, analyst at J.D. Power and Associates, said in the report.

Global carmakers are also eyeing United States, the world's largest vehicle market, for their diesel offerings. Honda Motor Co. recently said it has developed a new and simple diesel powertrain that is as clean as gasoline-fuelled cars, unveiling plans to mount it on a car for the US market by 2009 and later to other regions. DaimlerChrysler AG and Volkswagen AG, which sell an array of diesel cars in Europe, are also preparing next-generation diesel cars for 2008 US launch.

Klaus Maier, sales and marketing chief for Daimler's premium arm Mercedes Car Group, said Mercedes-Benz could meet or surpass the 15 percent market share that diesel was expected to have in the US premium segment by 2015. It also is stepping up its diesel campaign in other non-traditional diesel markets such as Japan.

Volkswagen is expected to remain the largest global supplier of diesel-fuelled light vehicles, followed by Ford Motor Co., according to J.D. Power. Toyota Motor Corp. is forecast to be the fastest-growing global diesel new-vehicle provider from 2005 through 2015, the group said.

14. EU Parliament Criticizes Draft 'Urban Environment Thematic Strategy'

On September 26th, the European Parliament adopted a 57-point resolution asserting that the European Commission's draft Thematic Strategy on the Urban Environment is "not sufficient to achieve the goals" established in the EU's Sixth Environmental Action Program.

The Commission released its draft Strategy on the Urban Environment in January. The plan is one of seven "thematic strategies" called for in the Sixth Environmental Action Program (6EAP).

"Contrary to the intentions of 6EAP, there are no legally binding measures and deadlines ... to address any of the goals set by 6EAP," the resolution said.

EU Environment Commissioner Stavros Dimas responded by insisting that the proposed approach based on nonbinding guidance, incentives, and the dissemination of best practices is "the way to proceed." Dimas nevertheless pledged to "monitor the effectiveness of the strategy and undertake reviews from time to time."

Parliament's resolution calls on the Commission, in cooperation with state authorities, to encourage every city with a population of more than 100,000 to establish a "sustainable urban management plan" (SUMP) and a "sustainable urban transport plan" (SUTP).

Legislators said SUMPs should spell out how cities will comply with various obligations laid down in EU law, including requirements for waste management plans (Directive 75/442/EEC on Waste); noise maps and remedial action plans (Directive 2002/49/EC on Management of Environmental Noise); and local air pollution plans (Directive 96/62/EC on Ambient Air Quality).

15. Italy Pledges Efforts to Combat Urban Pollution

On September 19th, Italy's Environment Ministry pledged to spend [Euros]100 million (\$128 million) to help combat urban pollution in response to a government report showing that more than 8,000 people die in Italy each year as a result of ailments related to smog. The report, from APAT, the ministry's technical wing, and the World Health Organization, monitored air quality and health levels in the 13 largest Italian cities over a three-year period ending January 1, 2005. The report blamed particle pollution for 9 percent of all non-road-related deaths in Italians over 30. The report also estimated that 7 million workdays are lost in Italy each year due to pollution-related health problems. The report looked at PM-10, or pollution consisting of particulate matter measuring less than 10 micrometers in diameter. The Environment Ministry did not offer details on programs or spending plans, but ministry officials said the money would be used to develop incentives for the use of cleaner modes of transportation.

16. EU Report Sees Bulgaria Lagging Behind Romania on Environment

Bulgaria has slipped behind Romania in adapting its environmental legislation to European Union standards, a European Commission monitoring report said on September 26th. The report was published in preparation for the countries' planned entry into the EU on January 1, 2007. Monitoring reports issued in May were more critical of Romania than of Bulgaria. The latest report, however, said Romania had made "good progress," especially in boosting administrative capacity and issuing industrial pollution permits.

As of August 31st, Romania had submitted 549 permit applications for plants covered by the EU Industrial Pollution Prevention and Control (IPPC) Directive, with 272 permits issued. Romania has 607 plants in total requiring permits.

The report also noted Romania had transposed EU waste and water quality legislation.

On genetically modified (GM) crops, Romania has "set up a system of registration and control," the report said, but "the enforcement of the legal framework needs improvement."

By contrast, the Commission said concerns persist over Bulgarian preparations.

The country has yet to establish an Environmental Impact Assessment register, must improve its administration of water quality rules, and must speed up registration of industrial plants covered by the IPPC Directive.

Bulgaria has so far issued 108 out of 230 permits, the report says.

Bulgaria's transposing of air quality legislation is also "lagging behind," according to the report, which calls for "increased effort" in this area.

Zornitza Venkova, spokeswoman for the Bulgarian Mission to the EU, said that environmental legislation had been particularly "heavy" and was the policy area in which the "highest number of transition periods were negotiated." She said the Commission's overall recommendation that Bulgaria could join the EU would "give us the impetus to continue our efforts, [though] it means a lot of financial effort."

17. France Publishes Rules for Car Pollution Tax

On September 6th, France published detailed instructions for the application of a new incremental registration tax on high-pollution vehicles that went into effect July 1st. The pollution tax, approved in late-2005, will be tacked onto one-time registration fees on vehicles that emit 200 grams or more of carbon dioxide per kilometer. Each additional gram of carbon dioxide emissions between 200 and 250 grams per kilometer will carry a [Euros]2 tax, while each additional gram of carbon dioxide emissions beyond 250 grams will carry a [Euros]4 tax, according to the document. The tax will apply to all new vehicles, as well as to used vehicles put into service on or after June 1, 2004, it states.

18. French PM Unveils Environmental, Energy Saving Plan

Prime Minister Dominique de Villepin has unveiled a "national pact for the environment", offering French households and firms 10 billion euros of cheap loans to finance energy saving projects. Villepin said the money would be available from January, 2007 and drawn from tax-free savings accounts at banks. He also promised measures to encourage the use of low-emission fuels and said coal would be taxed.

"This pact will draw together all the players - citizens, companies, local organizations, and the state. It will allow everyone to play a role in protecting the environment," Villepin said during a regular monthly news conference.

Villepin also announced the creation of new nature parks, including two windswept archipelagos near Antarctica, which are French territories and home to large penguin colonies.

The prime minister's ecology drive comes just seven months before presidential elections and underlines how mainstream parties are eager not to let the Greens party have a monopoly on environmental issues.

His announcement also comes at a time when his own approval ratings are rising in the opinion polls, reaching 32 percent in September from 26 percent in June, fuelling speculation that he has not abandoned his presidential ambitions.

Villepin's pact included pledges to increase the number of petrol stations around France offering low-emission, ethanol-based E85 fuel at its pumps as part of a move to ease France's dependency on fossil fuels.

Some 100 million euros would be given for further research into the development of hybrid motors.

The 10 billion euros for energy-saving programs will come from so-called Codevi accounts, which pay 2.75 percent a year interest and are currently capped at 4,600 euros per person. To raise the extra funds, Villepin said this ceiling would be lifted to 6,000 euros from Jan. 1. "The aim is to mobilize the savings of French people to help the environment," Villepin said.

19. France to Use Tax Incentives to Encourage Ethanol to Reduce Emissions

France will offer tax breaks next year to boost the use of ethanol in a bid to reduce greenhouse gas emissions in the transport sector, Finance Minister Thierry Breton said on September 27th. Shifting from traditional gasoline or diesel to crop-sourced ethanol offers "a real opportunity for both consumers and the environment," Breton said during presentation of the 2007 budget bill.

The bill contained a slight boost in the level of environmental spending for 2007.

Breton said that while the budget bill itself does not include any new tax breaks for ethanol, he would unveil measures in the coming weeks. France will offer consumers "interesting conditions, including fiscal conditions," to promote wider use of ethanol, he said.

Breton said the government will follow recommendations in a new report on expanding ethanol use presented on September 26th. The report, prepared by a commission led by former Formula One race car driver Alain Prost, suggests that France encourage national roll-out of a new fuel called E85, composed of 85 percent ethanol and 15 percent unleaded gasoline.

The report says the government should also encourage the major French and European car manufacturers to widen sale of so-called "flex-fuel" vehicles, which are already widely marketed in Brazil, that are capable of running on any mixture of ethanol and gasoline. Flex-fuel vehicles must be sold at similar prices to single-fuel vehicles, the report said.

Finally, the report recommends that the government lower existing gas taxes to ensure that the price of E85 stays below 0.80 euro-cents (\$1.10) per-liter, which would place it about 20 percent cheaper than average diesel prices. Transport and oil industry experts say prices for E85 may have to drop as low as 0.60 euro-cents per-liter to ensure that the low-mileage fuel is competitive with diesel fuel or unleaded gasoline.

Breton recognized that steep gas tax cuts would be needed to bring prices down to these levels, but insisted that "the state will do its part" to support wider use of ethanol.

The announcement of pending tax breaks is the latest in a series of pro-ethanol moves taken in recent years by France's center-right government. Officials have previously said farm-produced biofuels--currently used as an additive in most gasoline sold here--will represent 5.75 percent of all vehicle fuels by 2008, 7 percent by 2010, and at least 10 percent by 2015. To meet this goal, the government has issued a series of subsidized tenders to boost biofuel production and authorized construction of 10 new biofuel production facilities.

20. Industry Backs EU Hydrogen Research Plan

Forty-eight European firms have backed an EU public-private initiative to boost hydrogen and fuel cells research. The firms pledged to invest E5 billion in the next ten years, in addition to millions of euros to be allocated under the EU's seventh research framework program. The firms set out a series of targets to bring technologies to market by 2015, including fuel cell-powered vehicles and construction of 1 gigawatt of capacity for combined heat and power.

The announcement coincided with a meeting of the EU hydrogen and fuel cell technology platform.

21. Linde Sees 6 Million Hydrogen Cars in Europe by 2020

The chief executive of Germany's Linde Group sees more than 6 million hydrogen-powered cars on Europe's roads by the end of the next decade as consumers seek to cut pollution and avoid high oil prices. "This is a conservative estimate," Wolfgang Reitzle said, addressing automotive engineers at a congress in the German city of Aachen.

There are currently around 500 hydrogen vehicles worldwide, according to Linde. The head of the world's largest industrial gases group urged politicians to be more active in long-term planning for a greener future with hydrogen, which emits only water vapor when burned.

"Utopias can become a reality if certain people want it," he said.

Linde, which has global revenues of some 12 billion euros (US\$15 billion), inaugurated a new hydrogen center, which has a filling station, technology test center and training center, near Munich at a cost of 3 million euros, as it aims to position itself for growth in sustainable mobility.

The group is also working on producing hydrogen from regenerative sources -- or "biohydrogen" -- through biomass conversion, instead of through the conventional process that uses fossil fuels such as natural gas.

Reitzle said it would be necessary to spend around 3.5 billion euros to build a hydrogen infrastructure of 2,800 filling stations for the European car market, but high oil prices would eventually offset the cost.

With petroleum consumption in developing countries set to rise in line with economic growth, the trend towards higher oil prices would continue, he said.

"If every person in China were to enjoy the same standards of life as in America, then some 81 million barrels of oil more would have to be produced every day in the world -- over three times as many as all OPEC countries produce combined," he said.

He urged German automotive companies to be at the forefront in developing ways to integrate the alternative fuel into future cars.

"It would be a shame if Germany were to sleep through a trend in hydrogen technology the way we slept through hybrids," he said.

BMW's head of powertrain development, Klaus Borgmann, reaffirmed the carmaker's belief in the potential for hydrogen to reduce carbon dioxide output. "It combines a high energy density and low emissions, and that's why we think it's the trend going forward," the BMW executive told reporters on the sidelines of the congress. BMW is set to roll-out a 7 Series luxury saloon equipped with a hydrogen combustion engine in April. Its long-term goal is to eventually offer hydrogen motors in all of its cars.

22. London Council Plans High Parking Charges For Gas-Guzzlers

A London council is planning to charge residents who drive gas-guzzling cars significantly more for permits to park outside their homes, in a bid to tackle pollution. The Liberal Democrat controlled Richmond Borough Council in southwest London said it was proposing to introduce a charging structure based on a car's CO2 emissions, while residents with two vehicles would also be hit with a 50 percent surcharge.

However, environmentally friendly cars such as petrol electric hybrids would not have to pay for a permit at all. "If you've got an electric car you'll pay nothing, if you've got a small car you might go down by 50 percent, if you have an average car your charge will probably go down a bit or up a bit," said council leader Serge Lourie. "But if you've got a large car we'll be charging you significantly more. And if you've got a large Jag (Jaguar) for example you'll be paying 200 percent more," he told BBC radio.

The move comes after Liberal Democrat leader Menzies Campbell won backing for punitive environmental tax plans at the party's conference in September, putting green issues at the forefront of its policies. It also echoes plans by London mayor Ken Livingstone to hike the capital's congestion charge for drivers of large Sports Utility Vehicles (SUVs) to as much as 25 pounds a day from the current eight pounds.

Likewise Livingstone's proposals include a reduction in the current charge for motorists with cleaner vehicles.

In August, a poll found that over two-thirds of Londoners backed Livingstone's plans to discourage the use of 4x4s, mockingly dubbed "Chelsea Tractors" after the wealthy London district where they are especially popular. Richmond is another affluent area, with many families owning vehicles that would be affected by the proposals.

Under the council's plans, homeowners with a high-emission car, such as a Jaguar XJS, a Porsche 911 or Renault Espace, would pay as much as 300 pounds a year to park instead of the current 100 pound charge. Those with two such cars would face a possible overall bill of 750 pounds, taking the surcharge into account.

The Conservatives are also seeking to highlight their green credentials but the party's leader on Richmond council said such draconian measures would not get public support. Councilor Nicholas True said the plans amounted to a million pound tax on local families and businesses. "There's talk about gas-guzzlers," he told the BBC. "Actually small family cars, 1.5 liters and upwards, will pay extra under (the) proposals."

Motoring charity the RAC Foundation said the plan would target people with larger cars that they needed for their families. It called for incentives rather than penalties. "We would much rather see reductions for greener cars," said campaigns manager Sheila Rainger.

The AA Motoring Trust said: "Residents who need bigger vehicles to transport large families will see the environmental argument for this scheme as nothing more than a smokescreen for tax," said the trust's Ruth Bridger.

23. Norway's Plan Commits On Carbon Capture, Emissions Taxes, Energy

In its first full budget since taking office last year, Norway's center-left government has announced a series of measures aimed at strengthening environmental protection, cutting greenhouse gas emissions, and promoting biological diversity.

The initiatives, which were announced October 6th, include new taxes on nitrogen oxide emissions and on carbon dioxide emissions from domestic and commercial heating. The budget also earmarks funds to purchase carbon credits from abroad and to pay for the government's major commitment to carbon capture and storage technology that was originally announced in October 2005.

The government said in a statement it had pledged a total of NOK 860 million (\$128 million) towards research and the implementation of what it called "carbon dioxide chains," in which carbon is captured, transported to oil fields, and injected underground for permanent storage where it also helps to increase oil recovery.

Of the amount, NOK 720 million will go towards the establishment of an initial cleaning facility at the Karsto gas-fired power station north of Stavanger.

An Economic Adviser at the Norwegian Environment Ministry, Gunnar Farestveit, said that Norway's investment in carbon capture and storage has been driven by the planned introduction of new gas-fired power plants, which will increase carbon dioxide emissions substantially and make Kyoto Protocol commitments more difficult to fulfill.

"The hydro power era is now more or less over, and Norway is considering new energy options," Farestveit said. "We are committed to stabilizing emissions at 1 percent above our 1990 emission level. However, Norwegian greenhouse gas emissions increased by around 10 percent from 1990 to 2004. Without new measures, emissions are expected

to increase to 22 per cent above our Kyoto commitment.... If gas-fired power plants were to be constructed without CO2 sequestration, this figure could rise to 34 percent."

Although full details of the new emission taxes were not made public, the Oct. 6 budget statement confirmed that the levy on nitrogen oxide emissions will come into effect Jan. 1, 2007, and compensation schemes for "certain affected industries" will be introduced.

According to the statement, the new tax represents "an important contribution to meeting [Norway's] obligations pursuant to the Gothenburg Protocol, which governs transboundary air pollution."

The new tax on the use of carbon dioxide for heating homes and commercial buildings will come into force on July 1, 2007, although full details of that tax were also not divulged.

The government also announced the establishment of a new fund to support investments in renewable energy and energy efficiency.

Administered by the public energy agency Enova, the fund will be established with an initial grant of NOK 10 billion, with another NOK 10 billion pledged for 2009. According to an official statement, the aim of the fund is to provide "predictable long term conditions for investments in bio-energy, district heating and energy efficiency."

Enova is also charged with encouraging energy efficiency and the introduction of cleaner, more efficient domestic heating systems, partly through the introduction of a deposit and return system for oil-fired boilers.

Other measures include a change to the criteria used for calculating motor vehicle registration taxes to include carbon dioxide emissions, more support for Norway's National Energy Fund, and greater subsidies for public transport.

Support for renewable energy producers will take the form of a so-called "feed-in renewable electricity support system" which will guarantee producers a certain minimum price. Furthermore, Norway's national target for "environmentally friendly" energy production is to rise from 12 terawatt-hours per year by 2010 to 30 TWh by 2016.

Other specific provisions include:

- NOK 100 million has been set aside for the purchase of carbon credits from abroad in 2007;
- NOK 30.9 million has been earmarked for clean air initiatives;
- NOK 2.5 million will be set aside to combat the presence of unhealthy and environmentally damaging chemicals at an international level;
- NOK 22 million will go towards the protection of Norway's forests, and tax breaks for the replacement of felled trees have been proposed;

- NOK 8.5 million has been set aside to improve efforts to combat the so-called "gyro" parasite (gyrodactylus salaricus) which has devastated Norway's salmon stocks; and
- NOK 6 million will serve to "raise environmental awareness amongst the population."

Since being elected to power in September 2005, Prime Minister Jens Stoltenberg's coalition government has proved itself one of the most radical in Europe when it comes to environmental initiatives.

In a statement issued on October 6th, Environment Minister Helen Bjørnøy said that the government's aim was for Norway to be seen as a leading nation in the area of environmental protection. She described the 2007 budget plan as an "important step in the right direction."

24. Norwegian Commission Identifies Low Emissions Scenarios

The Norwegian Commission on Low Emissions was appointed by the Norwegian government on March 11, 2005. The Commission has been charged with the task of preparing scenarios of how Norway can reduce its emissions of greenhouse gases by 50-80 percent by 2050.

The Commission presented their final report to Minister of the Environment Helen Bjørnøy on October 4th 2006. It states that to gain control over the situation, major cuts in global greenhouse gas emissions are necessary. Fairness dictates that the rich countries reduce their greenhouse gases by about two-thirds from current levels by the middle of this century.

Today, oil and gas, the process industry, and transportation each represent about a quarter of Norway's emissions. The remaining emissions come primarily from heating, agriculture, and waste disposal. Future emissions levels are uncertain and are determined by national and international development.

The Commission has projected a scenario for how emissions growth can look in the future – a so-called reference scenario. The greenhouse gas emissions in the reference path in 2050 are about 70 million tons of CO2 equivalents. About three quarters of the emissions in this scenario are distributed fairly evenly between electricity production, the process industry, and transportation. The remaining emissions will come mainly from gas and oil activity, heating, agriculture, and waste disposal.

The Commission has identified 15 measures that together will ensure the necessary reduction in Norwegian emissions in a long-term perspective. The measures are mainly directed at specific and major emissions sources, with the exception of two basic measures that the Commission sees as prerequisites for the realization of the other measures.

Basic measures

- Implementation of long-term national investment in climate information – a long-lasting climate awareness campaign. Dissemination of accurate and relevant facts about the climate problem and what can be done.
- Investment in the development of climate-friendly technologies through long-term and stable support for the Commission's technology package. This technology package emphasizes technologies for carbon capture and storage, wind power (especially at sea), pellet and clean-burning woodstoves and fireplaces, biofuels, solar cells, hydrogen technologies, heat pumps, and low-emission ships.

Transportation

- Phasing in of low- and zero-emission vehicles, such as hybrid cars, light diesel cars, electric cars, and fuel-cell cars.
- Phasing in of CO₂-neutral fuels, such as bioethanol, biodiesel, biogas and hydrogen.
- Reduction of transportation demands through improved logistics and urban planning.
- Development and phasing in of low-emission ships.

Heating

- Increased energy efficiency in buildings through stricter building codes, eco-labeling, and subsidies.
- transition to CO₂-neutral heating through increased use of biomass, more effective use of solar heat, heat pumps, etc.
- Agriculture and waste disposal
- Collection of methane from manure pits and landfill, and use of the gas for energy purposes.

Process industry

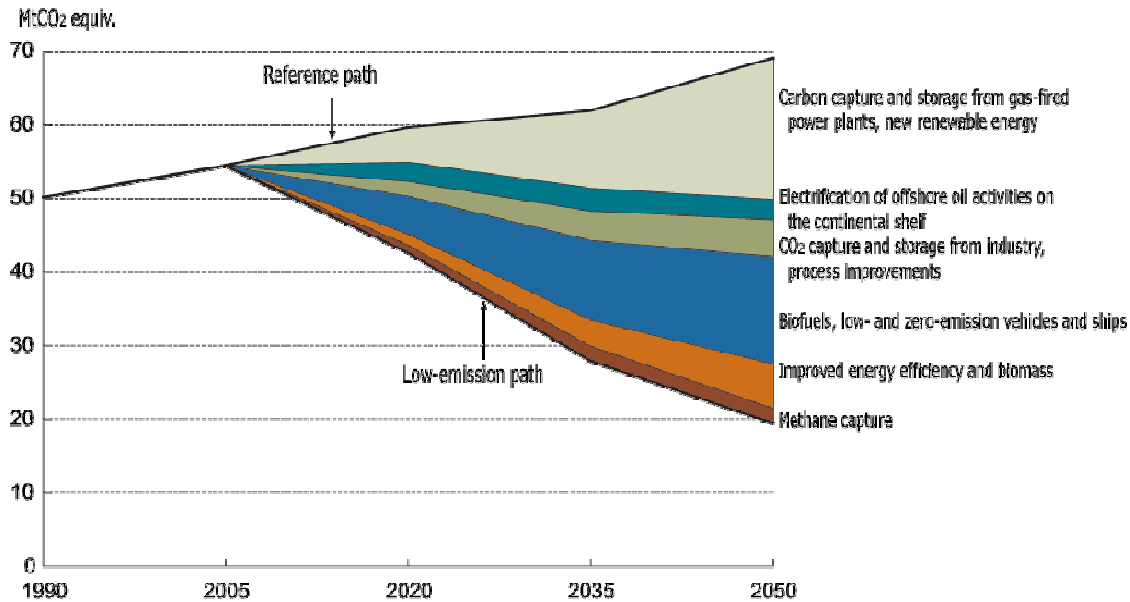
- Implementation of carbon capture and storage from industries with large pulse emissions.
- Implementation of process improvements in energy-intensive industries.

Oil and gas activities

- Electrification of the continental shelf and more facilities located on land.

Electricity production

- Expansion of "new renewable" energy through construction of wind and small hydro-electric power stations.
- Implementation of carbon capture and storage from gas-fired and coal-fired power plants.
- Upgrading and improved efficiency of the electricity grid to reduce loss in the grid and give smaller power plants better access.



Annual emissions of greenhouse gases in the past, in the Commission's reference path, and in the proposed low-emission path 1990–2050.

In cooperation with industry, energy suppliers and organizations, the Norwegian government and decision-makers must implement the following measures during the current parliamentary term:

- Develop information campaigns connected to climate change. This requires long-term government support of both general climate information and information on how each person can help reduce emissions without reducing their quality of life.
- Allocate funds for the Commission's proposed technology package and for the technology investment recommended by the Research Council of Norway's committee on climate research. This requires generous and long-term funding of prioritized research themes, including increased understanding of decision processes associated with climate measures.
- Further develop technological innovation by building pilot and demonstration projects.
- Realize carbon capture and storage in all gas-fired and coal-fired power plants.
- Invest in low- and zero-emission vehicles. This requires automobile taxation based on environmental incentives, government purchases, government regulation, and ensuring the sale of biofuels in an amount equivalent to at least five percent of the total sales in 2009.
- Increase investment in carbon-neutral heating through support of heating systems based on biofuels and heat pumps, as well as introducing a return deposit for outdated oil and gas boilers.
- Increase investment in energy efficiency improvements through stricter building codes for energy consumption per square meter.
- Establish of clear, stable, and long-term subsidies for development of renewable energy sources. This also includes suppliers of energy to the heating market.
- Stimulate climate-friendly government purchases. This requires comprehensive motivation and training programs for relevant government employees and stricter enforcement of regulations governing public purchases.

- Develop sector-based policy plans and policy recommendations from the ministries with the aim of making Norway climate friendly.
- Work actively to further develop the European emissions trading system and emissions trading under the Kyoto Protocol, as well as to encourage additional countries and sectors to take on binding emissions targets.

25. France Outlines Steps To Meet GHG Emission-Reduction Goals

France must immediately begin moving forward with energy, taxation, and transportation initiatives if it hopes to meet a target of reducing greenhouse gas emissions by 75 percent by 2050, according to a government report released October 9th. The report, prepared by a commission under the direction of economist Christian de Boissieu, provides a road map for achieving environmental and energy use objectives.

The principal objective is a fourfold reduction in emissions of the six principal greenhouse gases, from the 378 million tons emitted in 1990 to less than 102 million tons by 2050.

France must reduce greenhouse gas emissions by 3 percent annually to meet the so-called "Factor 4" target, which policymakers here have identified as the minimum national contribution to mitigating global climate change over the long-term, according to the report.

The new "Factor 4" report suggests that controlling energy demand through efficiency programs and new taxes is a critical step to take "as soon as possible" toward meeting the objectives.

Transport sector reforms and increased research and development into renewable energies and emission reduction technologies are also among the report's 29 principal recommendations.

"Factor 4 is possible, but it won't be easy," the report said.

The report makes a number of specific recommendations, including calls for:

- an immediate reduction in maximum speed limits on French highways to 120 kilometers per hour, which could reduce 3 million tons of carbon dioxide emissions annually;
- regulations forcing automobile manufacturers to limit carbon emissions to 100 grams per kilometer by 2020;
- a tax on household appliances and other capital goods based on energy consumption and emissions;
- a tax on kerosene to encourage fuel efficiency among airlines and limit air transport;
- conversion of freight transport from road to rail networks;

- increased renewable energy production, particularly in the biomass sector, coupled with reinforcement of nuclear power generating capacities; and
- preferential treatment for domestically produced food, coupled with policies aimed at limiting long-distance imported foodstuffs.

NORTH AMERICA

26. New US Air Pollution Rules Rankle Health Groups

The US government has approved new air pollution standards, promising "cleaner air to all Americans," but health and environmental groups said the revised rules are too weak to protect against lung disease and other pollution-related ailments.

The new standards will reduce premature deaths, heart attacks and hospital stays for people with heart and lung disease and brings health benefits valued at between US\$20 billion and US\$160 billion a year, according to EPA.

Daily standards for the amount of particles in the air were strengthened by nearly 50 percent. Previously, US law allowed 65 micrograms of soot particles per cubic meter of air; the new rules call for a limit of 35 micrograms. That reduction was less than what was sought by a broad coalition of environmental and health organizations, and a panel of EPA's own scientific advisers.

EPA's decision to keep annual standards for soot particles at the same levels they have been since 1997 -- 15 micrograms per cubic meter of air -- drew the ire of environmentalists, who had sought to have these strengthened.

Dozens of health groups -- including the American Medical Association, American Lung Association, American Heart Association, American Cancer Society and American Academy of Pediatrics -- had urged the agency to set tougher standards for short-term and long-term exposure to particle pollution.

"The industry believed that the existing standards continued to meet the legal requirement for the protection of human health," said Joe Stanko, counsel to the Electric Reliability Coordinating Council. Stanko said complying with the new standards would cost an estimated US\$20 billion to US\$60 billion a year. He said his group was considering possible legal appeal of EPA's decision.

States must meet these new standards by 2015, with a possible extension to 2020.

Prior to the EPA announcement, a new American Lung Association report¹ concluded that more than 77 million Americans could be left vulnerable to deadly particle pollution if the U.S. Environmental Protection Agency (EPA) adopted the weaker alternative which it did. By contrast, stronger new pollution standards supported by the Lung Association and other major medical and public health groups would protect 159 million people, the report concludes.

¹ Clean Air Decision 2006

The EPA last revised the particle standards in 1997. Since then, more than 2,000 peer-reviewed studies have been published on the health effects of particle pollution. The studies not only confirm earlier research that showed exposure to particle pollution causes sickness, hospital admissions and premature death, but that harm occurs even when pollution levels are well below current standards. People most vulnerable to particle pollution include children, senior citizens, and people with such chronic conditions as asthma, heart disease and diabetes.

EPA's own staff scientists and science advisers also had concluded that the current standards are not adequate to protect people's health. Despite this overwhelming evidence, the EPA has proposed making no change in the standard that governs annual exposure to particle pollution. It did propose an adjustment in the standard that governs daily exposure to the pollutant, though a much weaker standard than others under consideration.

27. EPA Analysis Shows Greater Benefits With Tougher PM Limit

Citing the expert opinions of a dozen scientists, the U.S. EPA today said its new standards for microscopic soot pollution will help avert between 1,200 and 13,000 premature deaths per year. But those same scientists also found even more lives could have been saved -- between 2,200 to 24,000 -- if EPA had set stronger limits last month for particulate matter.

EPA released the data on estimated premature mortality as part of a much broader Regulatory Impact Analysis. The RIA examines the costs and benefits associated with the Bush administration's final rule to revise the federal soot limits.

Steve Johnson, the EPA administrator, told reporters at the time of the rule's release that the scientific evidence did not support any change to the limits on annual concentrations of soot pollution as they were last set in 1997 during the Clinton administration. "This is very complex science," he said. "Reasonable people can disagree."

Johnson did agree to reduce soot levels as they are measured on a daily basis, reducing the limits from 65 micrograms per cubic meter to 35 micrograms.

EPA has since come under fire from its own body of outside science advisers, the Clean Air Science Advisory Committee. The group's seven charter members earlier this week took the unprecedented step of writing Johnson to complain their views were ignored. They wanted Johnson to take the annual limits from 15 micrograms per cubic meter down to 14 micrograms.

Groups like the American Medical Association, American Lung Association and the American Cancer Society have also questioned the new soot regulations. They had recommended Johnson reduce annual soot limits to 12 micrograms.

In its new study, EPA spelled out the differences in costs and benefits between the 15 microgram annual limit and the 14 microgram annual limit. To estimate premature deaths, EPA sought the advice of 12 scientists with expertise in the link between air pollution and human health. The scientists provided a range of opinions on the potential

lives saved under a 15 microgram annual limit, from 1,200 to 13,000. If EPA had set a limit of 14 micrograms, the scientists said the number of lives saved ranged from 2,200 to 24,000. Averaged together, the dozen scientists said about 7,000 lives would be saved under a 15 microgram limit. That compares with an average of 13,000 lives that would be saved under a 14 microgram limit.

Using models tied to epidemiology literature, EPA also estimated the benefits of 15 microgram and 14 microgram standards on other public health measuring sticks. For example, EPA said the limits Johnson settled on would mean 2,600 fewer cases every year of chronic bronchitis. That compares with 4,600 cases per year if Johnson had dropped the limit to 14 micrograms.

EPA said its new limits would lead to an estimated 5,000 fewer nonfatal heart attacks, though it said a 14 microgram limit would have meant an estimated 8,700 fewer nonfatal heart attacks. A 15 microgram limit would mean an estimated 350,000 fewer missed work and school days because of sickness, while a 14 microgram limit would have averted about 550,000 fewer days.

28. EPA Rejection Of Advisers' PM Advice Creates Tensions In Ozone Review

EPA's decision to reject the advice of its science advisers to tighten its ambient air quality standard for particulate matter (PM) is likely to heighten tensions between the agency and its Clean Air Scientific Advisory Committee (CASAC) as the agency moves to revise its standard for ozone. CASAC is already pushing back at EPA on the options the agency is considering to tighten the ozone standard, with the committee in the midst of writing a letter to Johnson rejecting the agency's draft option to leave the current standard unchanged.

CASAC's Chairwoman Rogene Henderson is publicly expressing her disappointment with Johnson, a former agency scientist, over his decision to reject CASAC's recommendation to tighten the annual or long-term exposure, standard for fine particulate matter (PM_{2.5}) from 15 micrograms per cubic meter (ug/m³) to 14 ug/m³. The agency did tighten the daily PM_{2.5} standard for short-term exposure but left the coarse particle standard unchanged, setting the stage for a major legal battle.

Henderson said she is worried that CASAC will "develop our recommendation [on ozone] and go forward and have the same thing happen again." She added that Johnson called her just prior to announcing the final PM rule on September 21st to tell her that he had based his decision on scientific advice he received from advisers not in the CASAC. The Clean Air Act designates CASAC to advise the agency on its national ambient air quality standards (NAAQS), which EPA must review every five years, and requires CASAC to operate in public.

"The scientific advice he heard in private trumped the scientific advice he heard in public," she said. "I am concerned the public is not well served. This is not a good trend at all. [EPA] is paying for CASAC, and then just disregards" its advice.

Johnson's spokeswoman says, "Administrator Johnson has tremendous respect for CASAC and the statutory role they play in developing policy proposals. Administrator

Johnson looks forward to continuing work with CASAC to develop the best environmental policy for all Americans."

EPA's rejection of CASAC's advice could be the basis for a legal challenge of the agency's rule. Some CASAC members and environmentalists provided detailed legal arguments why the agency is bound to follow CASAC's advice.

29. US EPA Proposes Mandated Clean Fuel Rules

The US Environmental Protection Agency has proposed new clean fuel rules to comply with a 2005 energy law that directs refiners and marketers to increase biofuel production from 4 billion gallons this year to 7.5 billion gallons in 2012. Agency officials said a national "renewable fuels standard" would expand biodiesel and fuel ethanol use, create new markets for farm products, provide greater energy security, and reduce toxic pollution from cars.

Specifically, EPA proposes 3.71 percent of all US gasoline sold next year be a "renewable fuel." Currently the standard is 2.78 percent of all gasoline sales.

Most of the fuel ethanol made in the United States currently comes from corn, although the White House says it wants to devote government research dollars to other potential feedstocks, including waste paper and landfill trash. Biodiesel is typically made from soybeans.

EPA projected that the pending rules would mean that the nation's petroleum consumption would drop by 3.9 billion gallons per year, with 14 million tons in greenhouse gas emissions reduced annually.

EPA's plan, still subject to public comment, also outlines a credit and trading system that the agency says would allow renewable fuels to be used where they are most economical, while giving fuel suppliers a flexible way to comply with the standard.

30. Bumps on the Road for US Ethanol Vehicles

Driving flex-fuel sports utility vehicles on E85 15,000 miles (24,000 km) a year can cost consumers an additional US\$400 per year, according to the Department of Energy. A recent study of 1,200 consumers by market research firm Synovate found 37 percent of drivers would consider purchasing a flex fuel vehicle, but that more than a third of those consumers lost interest when they learned about the reduction in fuel economy.

To be sure, ethanol is a growing source of domestic fuel that cuts greenhouse gas emissions. This year it has been growing into its role as a 10 percent additive in clean-burning gasoline, replacing suspected carcinogen MTBE. But experts doubt that E85 will ever develop into more than a niche market, meaning many of the millions of flex fuel vehicles in the United States may rarely run on the corn fuel, if at all.

"If you look at it as a gasoline additive, ethanol has a lot of potential," said A.G. Edwards's assistant energy analyst Eric Wittenauer. "As a gasoline substitute it loses all viability." Wittenauer said that even if all the US corn production had been put to ethanol

last year, it would have only displaced about 15 percent of US gasoline. Current production of the fuel replaces only about 3 percent of the fuel.

While US ethanol production has grown to 4.8 billion gallons a year, it needs to grow 30 percent before it saturates the 10 percent gasoline additive market, according to the federal Energy Information Administration.

While Wall Street, Silicon Valley venture capitalists and Midwest farmers have combined to create an ethanol boom, consumers must wait years for some projects to come on line.

There are about 5 million flex fuel vehicles in the United States. This is largely because government incentives since 1993 have allowed car manufacturers making flex-fuel cars to avoid paying a total of about US\$2 billion in fuel efficiency fines, according to the Union of Concerned Scientists.

But only about 700 of the 170,000 US gasoline stations offer E85. California has 1 private E85 station, and 13 states, including eight in the East, have none. A lack of pipelines and the need to install new tanks at service stations for E85 make it hard to add more stations quickly.

Fuel production might someday get a boost from cellulosic ethanol, made from plants such as switchgrass and poplar trees, which can grow on poorer land than food crops. But so far it is not being used commercially in the United States.

31. California Strikes Accord on Global Warming Bill

California catapulted to the forefront of US efforts to fight global warming with an accord that will give the state the toughest laws in the nation on cutting greenhouse gas emissions. Gov. Arnold Schwarzenegger, who has accused fellow Republican President George W. Bush of lacking leadership on climate change, said he reached a "historic agreement" with Democrats to make California a world leader in reducing carbon emissions.

"The success of our system will be an example for other states and nations to follow as the fight against climate change continues," Schwarzenegger said in a statement.

The bill passed in a 46-31 vote on the final day of the legislative session before November elections and now goes to Schwarzenegger for his signature.

Green policies are popular among voters in environment-savvy California, the world's eighth-biggest economy and the 12th largest producer of greenhouse gas emissions.

California's Global Warming Solutions Act aims to cut emissions to 1990 levels by 2020 with an enforceable cap and mandatory reporting for top polluters like energy companies.

The United States is the world's largest producer of the heat-trapping gases that many scientists link to extreme weather like violent hurricanes and rising sea levels. But Bush pulled the United States out of the 160-nation Kyoto Protocol to cut greenhouse gas

emissions in 2001, arguing that it would hurt the economy and unfairly excluded developing nations like China.

32. California Sues Carmakers Over Global Warming

California sued six of the world's largest automakers over global warming on Wednesday, charging that greenhouse gases from their vehicles have caused billions of dollars in damages. The lawsuit is the first of its kind to seek to hold manufacturers liable for the damages caused by their vehicles' emissions, state Attorney General Bill Lockyer said.

It comes less than a month after California lawmakers adopted the nation's first global warming law mandating a cut in greenhouse gas emissions.

California has also targeted the auto industry with first-in-the-nation rules adopted in 2004 requiring carmakers to force cuts in tailpipe emissions from cars and trucks. Automakers, however, have so far blocked those rules with their own legal action -- prompting one analyst to say California's lawsuit represents a way for California to pressure car manufacturers to accept the rules.

The complaint, which an auto industry trade group called a "nuisance" suit, names General Motors Corp., Ford Motor Co., Toyota Motor Corp., the US arm of Germany's DaimlerChrysler AG and the North American units of Japan's Honda Motor Co. and Nissan Motor Co. Ltd.

Lockyer said he would seek "tens or hundreds of millions of dollars" from the automakers in the lawsuit filed in US District Court in Northern California.

Environmental groups hailed the lawsuit, saying it represented another weapon for the state as it seeks to curb greenhouse gas emissions and spur the auto industry to build vehicles that pollute less.

"Automakers will need time to review this legal complaint, however, a similar nuisance suit that was brought by attorneys-general against utilities was dismissed by a federal court in New York," the industry group said in a statement.

The lawsuit seeks monetary damages for past and ongoing contributions to global warming and asks that the companies be held liable for future monetary damages to California. It said California is spending millions to deal with reduced snow pack, beach erosion, ozone pollution and the impact on endangered animals and fish.

"The injuries have caused the people to suffer billions of dollars in damages, including millions of dollars of funds expended to determine the extent, location and nature of future harm and to prepare for and mitigate those harms, and billions of dollars of current harm to the value of flood control infrastructure and natural resources," it said.

In the complaint, Lockyer charges that vehicle emissions have contributed significantly to global warming and have harmed the resources, infrastructure and environmental health of the most populous state in the United States.

33. Schwarzenegger, Bloomberg Team on Climate Change

California Gov. Arnold Schwarzenegger and New York City Mayor Michael Bloomberg have reached an agreement to work together to reduce greenhouse gas emissions because the Republicans said they cannot wait for the Bush administration to take action on climate change.

Schwarzenegger said that the partnership with Bloomberg and another made with British Prime Minister Tony Blair in July on clean energy technologies will help improve the environment.

"We don't wait for the federal government to take the leadership position ... we take the lead," Schwarzenegger said during a tour at a new fuel cell company in Silicon Valley.

Bloomberg echoed the governor's remarks, saying, "We have to deal with real world problems ... we can't wait for Washington to do something."

Schwarzenegger added clean energy is "the future of California, the nation and the world" that will produce new industries, jobs and strengthen the economy.

His pledge to work with Bloomberg marks the latest environmental push from a governor who has accused fellow Republican US President George W. Bush of failing to show leadership on climate change. He also played a leading role in a bipartisan landmark global warming bill lawmakers approved last month that makes California the first US state to mandate a cut in greenhouse gas emissions, equal to 25 percent by 2020.

Schwarzenegger said he will sign the bill into law next week.

Bloomberg also announced a five-point program to make New York an "environmentally sustainable city" by taking an inventory of carbon dioxide and other greenhouse gases that will help set targets for lowering emissions. "The intent is to make New York City a national leader on the environment ... a sustainable city," Bloomberg said at a news conference.

The company Schwarzenegger and Bloomberg visited, Bloom Energy, formerly Ion America, is developing fuel cell systems to power homes, offices, factories and data centers.

34. California Linking State With Other Trading Schemes

On October 16th, California Governor Arnold Schwarzenegger said he would sign an executive order to link the state's cap-and-trade system for curbing greenhouse gas emissions to similar efforts under way in Europe and the northeastern United States. "No state can fight this war alone," Schwarzenegger told a press conference in New York City that followed a meeting with New York Gov. George Pataki to discuss linking the efforts in California and the Northeast.

Pataki said he and Schwarzenegger will continue to press for federal regulatory limits on greenhouse gas emissions, which have consistently been opposed by the Bush administration. But Pataki said the absence of federal action is driving states to regulate emissions on their own. "We both believe firmly that having a consistent, coherent

national approach would be far better than having states and regions having competing or alternating approaches," said Pataki, who led effort to set up the Regional Greenhouse Gas Initiative (RGGI).

The executive order is meant to begin implementing California legislation (A.B. 32) approved in September that calls for cutting emissions of carbon dioxide and other greenhouse gases in the state to 1990 levels by the year 2020.

While the law set those and other specific targets, the Legislature left it to state agencies to achieve the reductions. For example, it directed the California Air Resources Board to develop regulations to implement the cap-and-trade effort.

Under Schwarzenegger's executive order, the CARB is directed to ensure that California's program "will permit trading with RGGI, the European Union, and other jurisdictions." Schwarzenegger said at the news conference that the system could be linked to emissions reduction efforts in nearby western states, other regional pacts similar to RGGI, or other nations.

Under an emissions trading scheme, power plants and other producers of greenhouse gas emissions are provided or sold credits representing the right to emit a specific amount of carbon dioxide or other gases. Emissions sources that exceed the cap must buy credits from plants or other sources that emit less.

The executive order also directs the CARB to collaborate with other agencies in the state to explore economic incentives that could cut compliance costs imposed by A.B. 32.

It directs Linda Adams, California's secretary for environmental protection, to launch a panel of national and international experts on emissions trading--to be called the Market Advisory Committee--to provide specific recommendations to CARB on the design of the trading program. The executive order also gives the secretary authority to oversee the efforts of various state agencies to reduce greenhouse gas emissions.

Currently New York, Connecticut, Delaware, Maine, New Hampshire, New Jersey, and Vermont participate in the RGGI effort. An eighth state, Maryland has pledged to join in the spring of 2007.

Linking the California and RGGI emissions trading programs would likely take several years. The California law (A.B. 32) gave the state's CARB until Jan. 1, 2008, to set the statewide emissions cap and until Jan. 1, 2011, to implement its emissions trading system.

Under RGGI, the states must have final legislation or regulations in place prior to 2009, when a cap on greenhouse gas emissions from power plants goes into effect.

Elsewhere, the European Union officially launched its Emissions Trading Scheme in January 2005 as a key component of its effort to meet binding emissions reduction targets under the Kyoto Protocol.

35. Rise in State Climate Efforts Seen Leading to Federal Controls

Activity by U.S. states to limit greenhouse gas emissions over the last year suggest the country is now a "hibernating giant" that is only a few years away from adopting a federal cap on emissions, Point Carbon, a firm that specializes in information on carbon markets, said in a report Sept. 13. "The regional trading initiatives are compounding pressure from public opinion, and, increasingly, from corporate America, on the federal government to come up with a market-based mechanism to deal with greenhouse gas emissions," according to the report, Carbon Trading in the U.S.: The Hibernating Giant.

The report said there is now a "high likelihood of seeing a federal greenhouse gas trading system emerge in 2009," which would follow the next presidential election. The report said states have moved rapidly in the last year to fill the regulatory void.

In December 2005, seven northeastern states launched the Regional Greenhouse Gas Initiative, which calls for capping carbon dioxide emissions at power plants beginning in 2009. The states agreed to further curb emissions by 10 percent between 2015 and 2019. The RGGI states--Connecticut, Delaware, Maine, New Hampshire, New Jersey, New York, and Vermont--finalized a model rule in August that will be used to implement the plan for capping and trading carbon dioxide emissions in each of the states over the next year.

Maryland then approved legislation in April that is expected to make it the eighth state to join the RGGI effort in mid-2007.

The California Legislature approved legislation on August 31st to require statewide caps on emissions of carbon dioxide and other greenhouse gases linked to climate change. California, itself the world's 12th-largest emitter of carbon dioxide, pledged to cut emissions to 1990 levels by 2020, a reduction of about 25 percent.

The RGGI effort and regulatory action on greenhouse gas emissions in other states--including Oregon, Arizona, and North Carolina--ultimately will persuade many industry opponents to end their opposition to a federal regulatory system to avoid a patchwork of state-by-state greenhouse gas regulations, according to Veronique Bugnion, a researcher with Point Carbon. Without federal action, companies with operations in the United States and Europe could face separate carbon caps under three or more separate regulatory systems, including the Kyoto Protocol, the RGGI regional effort, and regulations imposed by California and other states, Bugnion said.

36. Plan Would Offer Detroit Automakers Credit Help

A proposal to offer up to US\$20 billion in US loan guarantees to automakers to develop alternative fuels, hybrids and other energy saving technologies is expected to be introduced soon in Congress. The plan by Rep. Mike Rogers, a Michigan Republican, is specifically aimed at struggling Big Three domestic vehicle manufacturers - General Motors Corp., Ford Motor Co. and DaimlerChrysler's US unit, Chrysler Group.

It is the first large-scale government proposal designed to help Detroit's auto sector since its financial troubles became more acute this year.

The auto giants are wrestling with declining market share and crippling health care and pension costs. GM and Ford are closing plants and eliminating tens of thousands of jobs. Chrysler Group said this week it would slash production due to a glut of unsold vehicles.

Rogers hopes his US\$20 billion initiative can speed research and development of gasoline-electric hybrid technology, clean diesel, hydrogen, and flexible fuel alternatives.

Rogers hopes to gain congressional backing this year, said spokeswoman Sylvia Warner. But time is short with lawmakers set to leave by the end of the month to campaign for November elections.

The option would also be open to foreign manufacturers, but those companies would have to move their research and development operations to the United States to qualify.

37. Report Says U.S. GHG Can Be Cut by 20% Using Existing Tools

Using tools that already exist, the United States can reduce its global warming emissions by nearly 20 percent within the next 15 years, according to a report released on August 24th by the U.S. Public Interest Research Group. The report lists "six challenging but feasible steps" focused on energy efficiency and use of renewable energy sources to put the nation on a path to avoid the worst effects of global warming, according to the environmental group.

The steps "are not easy, nor are they the only available paths to reducing global warming emissions," the report said. However, taking the actions would achieve significant reductions in global warming pollution and reduce dependence on scarce fossil fuels, the group said.

Policy recommendations that flow from the steps include setting science-based limits on carbon dioxide and other global warming gases that would cut current emission levels within 10 years and achieve reductions of 15 percent to 20 percent by 2020. The report also recommends complementary policies that include higher fuel economy standards, stricter energy efficiency regulations for appliances, and a requirement that a large and increasing share of the nation's electricity come from renewable energy.

U.S. PIRG's list includes a number of vehicle-related actions. The group suggests reducing automobile travel through changes in public policy and development patterns. This would mean shifting public investment away from highway construction and toward transit infrastructure. The report notes that capital expenditures for highways totaled \$70 billion in 2004, compared with \$9.3 billion for transit projects.

Higher gasoline prices are already causing many Americans to cut down on driving where they can and use alternatives whenever possible, the report said. In 2005, vehicle-miles traveled increased by 0.1 percent, the slowest rate of increase since 1980, according to the group.

While many Americans do not have convenient alternatives to driving, what can be done without major new capital investments is promotion of carpooling, vanpooling, telecommuting, walking, and biking, the report said.

The report also suggested increasing vehicle fuel economy standards to 40 miles per gallon and establishing fuel economy standards for large trucks. Increasing the fuel efficiency of heavy-duty trucks by 50 percent would reduce carbon dioxide emissions by 1.3 percent of the U.S. total in 2004, the report said.

U.S. PIRG has been encouraging higher fuel economy standards for some time. In May 2005, the group said that U.S. consumers could prevent the emission of nearly 24 million tons of carbon dioxide if the federal government were to require a 40 mile-per-gallon fuel-economy standard.

To further reduce use of fossil fuels, the report suggests the United States should replace 10 percent of vehicle fuel with biofuels or other clean alternatives. Ethanol and biodiesel that are produced cleanly and sustainably have the potential to significantly reduce global warming emissions from transportation, according to the report.

38. Low-Sulfur Diesel Fuel Launched Successfully

The biggest revolution in highway fuels since lead was removed from gasoline was nearly complete in mid October as a vast majority of trucks and buses will be able to fill their tanks with diesel fuel with just 3 percent of the sulfur content in the older fuel.

Like lead, sulfur generates air pollution that leads to severe health consequences. Like lead, it also gums up the works of fine-tuned pollution control devices, making it exceedingly difficult to produce cleaner-burning engines.

So the new fuel will pave the way for new generations of diesel engines that will eventually cut lethal particulate pollution from diesel tailpipes an estimated 95 percent.

The new fuel contains 15 parts per million of sulfur, down from the standard of 500 parts per million, thanks to changes in the refining process. At least 80 percent of the diesel available for trucks and buses has to meet the new standard. Officials of the environmental agency said that the changeover was occurring so swiftly that 90 percent of the fuel would be compatible.

Old diesel engines burning the cleaner fuel will reduce dangerous particulate emissions by about 10 percent. New engines with improved controls, which have to be available by January 1st, will cut this particulate pollution by more than 95 percent. The rule mandates even more improved engines in 2010.

The new fuel is expected to cost 3 cents to 5 cents more per gallon. Like many regulations that took effect in the twilight of the Clinton administration, the diesel rule, covering fuel and the seven million trucks and buses on the roads, was temporarily stayed by the Bush administration. Then the Environmental Protection Agency allowed it to proceed and in 2004 supplemented it with a similar rule requiring tight controls on engines in off-road equipment like cranes, tractors and construction equipment.

The relatively high sulfur levels in diesel have been a significant obstacle to producing diesel-powered cars that met federal environmental standards. Several engine and automobile manufacturers have signaled that more high-mileage diesel-fueled cars, a fixture on European highways, may become available.

The environmental agency estimates that when the current truck and bus fleets have been replaced and all are using the heavy-diesel engines that will become standard-issue next year, the new rule will prevent 8,300 premature deaths annually.

39. Canadian Commissioner Urges Concrete Targets in Lieu of Kyoto Goals

On September 28th, Federal Environment Commissioner Johanne Gelinás criticized the Canadian government for doing too little to address climate change and called for concrete emission-reduction targets. "The current government has announced that Canada cannot realistically meet its Kyoto target," Gelinás said in the commissioner's annual report to Parliament. "If so, then new targets should take its place."

"In this vein, the government must make a concerted effort to slow the rate of growth of greenhouse gas emissions, ensure that emissions reach their peak as soon as possible, and then achieve substantial reductions in absolute levels of emissions," the report said.

It called for the federal government to develop a "believable, clear, and realistic" plan to significantly reduce greenhouse gas emissions. The plan must commit to short- and long-term national goals, with a short-term focus to maintain urgency and momentum and a long-term focus to provide certainty needed for major capital investments, it said.

"There is a foundation to build on, with motivated and talented public servants and good programs that have made some headway in reducing emissions," Gelinás said in her statement accompanying the report. "What we need now is a commitment to specific actions, with timeframes for completing them."

Canada is committed under the Kyoto Protocol to reduce its greenhouse gas emissions by 6 percent from 1990 levels by the period 2008-2012, but the government's 2004 data indicate that emissions are about 27 percent higher than 1990 levels and continue to rise, Gelinás said.

The government has launched several successful programs that are reducing emissions or are poised to reduce them in the future, but it has also struggled to implement other key initiatives, including the pivotal reduction plan for large industrial emitters and a domestic emissions trading system, the report said.

Even the successful programs appear unable to meet the task of reducing emissions to meet the Kyoto obligations, it said. For example, the transportation and industry sectors account for 78 percent of total Canadian emissions of greenhouse gases, but reduction measures for those sectors are not expected to bring emissions below 1990 levels and might, at best, slow the rate of growth in emissions, it said.

At the same time, shifting responsibilities between federal departments and ministers, turnover of key personnel, and changes from one plan to another have caused delays and a loss of momentum, it said. And the government continues to face challenges in convincing other players to participate and in mobilizing concerted action, it said.

"Achieving success on a problem as pervasive as climate change demands that all levels of government, industry and business groups, science, academia, and civil society

organizations collaborate. The reality to date is that some players have been unwilling to do so. Deep divisions and conflicts remain," it said.

The report also criticized the government's apparent lack of accountability for its actions to date on climate change. It has not released a comprehensive report on climate change spending or the results of its actions since 2003, and the next comprehensive report is not expected before 2008, it said.

40. Canada's Greenhouse Gases To Increase 47 Percent Above Kyoto Target

On October 3rd, Natural Resources Canada projected that Canada's greenhouse gas emissions will grow to 828 megatons of carbon-dioxide-equivalent in 2010, fully 47 percent above Canada's emissions target under the Kyoto Protocol. Canada's Kyoto target is 563 megatons of CO₂e for the 2008-2012 commitment period, representing a 6 percent reduction in greenhouse gas emissions from 1990 levels. "This implies a 'gap' of 265 megatons, 32 percent of the projected level," the department said in its annual energy outlook.

Overall emissions growth, however, is expected to slow between now and 2020, the report said. Emissions increased from 599 megatons of CO₂e in 1990 to 758 megatons in 2004, representing average annual growth of 1.7 percent, it said. Over the remainder of the period to 2020, growth will slow to 1.1 percent annually, compared to the 2.4 percent growth rate projected for Canada's economy, it said.

"The share of GHG emissions among sectors is expected to change modestly between 2004 and 2020," it said. "Transportation will continue to have the largest share, increasing slightly from 25 percent in 2004 to 26 percent in 2020. More significant changes are expected to take place in the refining sector, whose share is expected to increase from 4 percent to 8 percent by 2010 and to 10 percent by 2020."

The latest report projects the following changes in greenhouse gas emission levels for key sectors of the Canadian economy:

- transportation--an increase from 2004 levels of 16 megatons or 1.4 percent per year between 2004 and 2010 to reach 208 megatons and a further increase of 25 megatons or 1.1 percent per year to 233 megatons in 2020;
- industry--growth of about 0.7 percent per year through 2020 to 110 megatons of emissions in 2010 and 118 megatons in 2020;
- oil and gas production--an increase from 127 megatons in 2004 to 133 megatons in 2010, then a decrease to 124 megatons in 2020 reflecting anticipated changes in the production mix;
- petroleum refining--an increase from 29 megatons in 2004 to 63 megatons in 2010 and to 87 megatons in 2020, representing an annual growth rate of about 13 percent between 2004 and 2010 and 3.4 percent between 2010 and 2020;

- electricity--a slight increase from the 130 megatons in 2004 to 131 megatons in 2010, then a decline to 126 megatons in 2020, largely due to Ontario's planned retirement of its coal-fired electricity generating plants;
- residential--unchanged at 45 megatons per year between 2004 and 2010, increasing to 48 megatons per year by 2020 in response to projected growth in energy demand; and
- commercial--a slight increase from 38 megatons in 2004 to 40 megatons in 2010 and a further increase to 49 megatons by 2020 due to increasing floor space.

41. Canada's Harper Promises Clean Air, GHG Legislation

On October 10th, Canadian Prime Minister Stephen Harper promised that his government will introduce legislation to provide an integrated approach to controlling air pollution and greenhouse gas emissions. His "Clean Air Act" will establish Canada's first comprehensive and integrated air quality legislation, replacing voluntary compliance by industry with "strict enforcement," Harper told reporters in Vancouver.

"We have a plan that is going to replace rhetoric with results, a plan that is going to move from short-term headlines to long-term progress," he said. "It's a serious, made-in-Canada plan that will deliver real results over the long term."

The proposed legislation will also replace the current patchwork of regulations with consistent, comprehensive national standards, and will adopt a holistic approach that does not address pollutants and greenhouse gas emissions in isolation, he said.

Harper said his government would take a more serious approach to climate change than that taken by the previous government, which tied many of its policies to the Kyoto Protocol.

"Canada's Clean Air Act wasn't developed on the fly at a press conference. It wasn't written at an international meeting held in an exotic location. And we're certainly not going to hire a comedian to promote it," he said. "I have no doubt that there will be those who say we are not doing enough, that these steps don't go far enough or fast enough... . But that is what they said when the acid rain treaty was signed [with the United States] in 1991."

Harper would not provide details of the proposed legislation. He noted, however, that the government would consult extensively with provincial governments in developing the new regulatory system, and that the regulations would cover a range of pollutants including carbon dioxide, nitrous oxide, and sulfur dioxide.

The regulatory system must also regulate emissions from western Canada's booming oil and natural gas sector, including the rapidly expanding oil sands developments, he said. "If we are going to make significant progress on some of these emissions, in particular greenhouse gases, that will have to include significant progress in the oil sands," he said.

42. NESCAUM, Ontario States to Coordinate Pollution Research

On October 6th, Ontario Environment Minister Laurel Broten announced an agreement with air quality officials from eight northeastern U.S. states on joint efforts to address transboundary air pollution. The letter of intent with the Northeast States for Coordinated Air Use Management (NESCAUM) will help coordinate cross-border efforts on smog, airborne toxics, acid deposition, emerging air quality issues, and climate change, Broten said in a statement. The agreement commits the jurisdictions to share information on air quality surveillance and monitoring, identify and work on joint studies, exchange information on air pollution control technologies, identify emerging transboundary air quality problems, and develop and exchange mitigation or control policies and procedures, she said. The board of directors of NESCAUM, founded in 1967, is made up of the air quality directors of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

ASIA-PACIFIC

43. China Reports Cities Suffering From Severe Air Pollution

More than half of Chinese cities suffer from air pollution according to a report by the state environment watchdog. The report, issued by the State Environmental Protection Administration (SEPA) rated air pollution the major environmental problem for urban areas after assessing last year's environmental conditions in 509 cities.

According to the report, air quality in only 44.9 percent of cities was above Grade II, a national standard indicating a clean and healthy air environment. However, the figure was 12.6 percentage points higher than the figure for 2004. Forty-three cities, down by 9.9 percentage points, were put on SEPA's black list, with air quality below Grade III, meaning they suffered serious to very serious air pollution.

North China's Shanxi Province, the country's largest coal supplier and most polluted region, has the dubious distinction of having 16 cities on the list. Neither Beijing nor Shanghai appears on the list.

It called for local governments to play a leading role in improving urban environment with officials' evaluation closely linked to their performance in pollution control.

Local governments should also pay more attention to problems like noises, floating dust, vehicle emission and pollution by catering industry, which the public has complained about a lot, it said.

44. SEPA Says That China Failing to Cut Sulfur Emissions

China failed to rein in two main pollution indicators in the first half of the year as soaring energy use and lax environmental controls thwarted policies to clean foul water and skies, the government has announced. "Environmental protection and economic development are not proceeding in unison," the China Environment News, the official paper of the State Environmental Protection Administration (SEPA), wrote in an editorial.

China has set a goal of cutting pollution output by 10 percent, adjusted for economic growth, over the next five years. But just last week, Chinese authorities said acid rain caused by sulfur dioxide affected a third of China's land mass last year. In the latest

assessment, SEPA announced on its Web site that nationwide emissions of sulfur dioxide from coal-fired power stations grew to 12.7 million tons in the first six months -- up 4.2 percent on the same period last year.

The official environmental monitor also said its key measure of water pollution -- "chemical oxygen demand" or COD -- rose 3.7 percent. COD gauges the noxiousness of wastewater.

In the editorial, SEPA laid the blame for the rising pollution on poor enforcement and a "crude mode of economic growth".

Many new power stations have equipment to strip sulfur from smoke, "but the level of use is not high", said the official announcement.

The official numbers came in the wake of repeated warnings by officials that China is failing to tame pollution even after promising a shift to clean development. A senior parliamentary official, Sheng Huaren, said discharge of sulfur dioxide rose by 27 percent between 2000 and 2005 to 25 million tons, making the country the world's top emitter of the pollutant. China's sulfur dioxide emissions were double the acceptable limit, he said.

45. China to Increase Sulfur Controls In Response to Worsening Acid Rain

In August, China announced plans to renew efforts to reduce sulfur dioxide emissions following the release of a government report that found emissions rose by 27 percent from 2000 to 2005. Acid rain, which is caused by sulfur dioxide, affected one third of China's territory in 2005, the official Xinhua News Agency reported on August 26th. A report released earlier in the month said China had recently become the world's top emitter of sulfur dioxide.

In response, China's State Environmental Protection Administration announced a series of actions to combat emissions. One key initiative, officials said, would be to fully implement a plan first outlined in 2003 to establish a nationwide sulfur dioxide emissions trading program.

Deputy SEPA Director Li Xinmin told reporters that the agency would first formalize emission-reduction contracts with the country's six-largest power companies, which are together responsible for 60 percent of China's sulfur dioxide emissions. SEPA will then sign agreements with provincial authorities to allow them to trade sulfur emissions. Li said the target is to reduce sulfur dioxide emissions by 10 percent in the next five years. China has failed to meet previous targets for reducing sulfur emissions. Li acknowledged that the new target would also be tough to meet.

"Coal accounts for 70 percent of China's energy consumption," said Li. "This fact is hard to change in the short term."

46. China Estimates Economic Damage From Pollution

Pollution in China caused economic damage equal to at least 3.05 percent of total gross domestic product in 2004, the State Environmental Protection Administration (SEPA) said in a report on September 8th. The "green GDP" figure was developed as part of an

effort to internalize costs associated with pollution and thereby to influence economic policies. Earlier this year, the National Bureau of Statistics announced it had suspended plans to participate in an effort to develop an annual green GDP report. SEPA, however, continued on its own. SEPA said in a statement the results released this month showed "only a part of actual resources and environmental costs." It continued, "Due to limitations of basic data and technical approaches, the results for 2004 represent only the environmental pollution cost, without accounting for costs of natural resources depletion and ecological damage." The report attributed 56 percent of the damage found to water pollution and 43 percent to air pollution. The effects of damage to groundwater and soil were not calculated.

47. Southeast Asian Governments Promise Tougher Action on Haze

On October 13th, Southeast Asian environment ministers pledged to step up joint efforts to fight the haze that has again blanketed the region in recent weeks caused by fires in Indonesia. Officials from Brunei, Malaysia, Indonesia, Singapore, and Thailand said in a joint statement issued after an emergency meeting in the Indonesian city of Pekanbaru that they would establish a ministerial steering committee to "oversee the implementation of short and long-term plans to effectively tackle the haze problem," including improvements to joint monitoring, reporting, and firefighting mechanisms.

The ministers said they would stage a regional workshop in Indonesia in early November to examine new measures to combat the seasonal haze, such as "seeking international expertise so as to develop a comprehensive plan of action."

The outcomes of the workshop, as well as the formation of the committee, will be submitted to environment ministers from the Association of Southeast Asian Nations (ASEAN) in November and a summit of ASEAN leaders in December for final endorsement. ASEAN officials also plan to convene a ministerial meeting in Brunei in early 2007 to translate new haze-fighting plans into action.

Officials at the October 13th talks also called for the rapid implementation of key aspects of the ASEAN Agreement on Transboundary Haze Pollution, which came into effect in 2003 and contains provisions on information sharing and joint fire-prevention initiatives.

The ministers agreed on the need for the "operationalization" of a fund established under the pact designed to provide financial assistance to governments in their firefighting efforts.

The ministers also "respectfully" urged Indonesia, the only ASEAN member that has yet to endorse the transboundary haze treaty, to "urgently finalize" the ratification of the agreement. The Indonesian government has consistently maintained that it intends to accede to the agreement but that the ratification must make its way through the country's fractious parliament.

A spokesman for Indonesian president Susilo Bambang Yudhoyono, Dino Patti Djalal, told reporters on October 12th that Indonesia would soon ratify the pact as part of a "comprehensive solution" to the haze issue.

The flurry of diplomatic activity on the haze front comes as air quality has once again deteriorated throughout the region, particularly in Malaysia and Singapore. Both Malaysia's Environment Department and Singapore's National Environment Agency have recorded moderate to unhealthy pollution levels throughout much of October, and have warned that air quality could plummet further before the situation returns to normal.

The current crisis has sparked fears of a repeat of 1997, when the acrid smoke cost Southeast Asia billions of dollars in lost tourism revenues and health costs, and has provoked a relatively strong response from the region's governments.

Singapore Prime Minister Lee Hsien Loong expressed "disappointment" over the recurring haze problem in an October 12th letter to Indonesia's President Yudhoyono, and called on Indonesia to deal with the haze "in a timely and effective manner" to protect investor confidence and ASEAN's credibility.

Malaysia's Ministry of Natural Resources and Environment has also pressured Indonesia to finalize ratification of the haze treaty and to prosecute companies setting fires to clear land for farming.

According to Indonesian authorities the traditional practices of small-scale farmers are responsible for many of the fires, but environmental groups have placed most of the blame for the haze on large plantation owners.

A report released by the ASEAN Secretariat on October 13th stated that hundreds of "hotspots" continued to burn on Kalimantan, the Indonesian portion of the island of Borneo, and the island of Sumatra. An ASEAN panel of experts believes the region is in the midst of a prolonged dry season that is unlikely to provide any respite from the haze until at least November.

ASEAN member countries are Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

48. New Zealand's Smoky Cars Will Be Victims Of New WOF Test

A new visible smoke test will be part of the warrant of fitness check from October 27, the Government announced as it moved to reduce emissions and clean up air. The test will involve running the engine for five seconds at idle and then for five seconds at a higher speed. If it is still smoking after five seconds, it will be off the road until it is repaired.

Associate Transport Minister Judith Tizard said vehicle emissions contributed to an estimated 400 deaths every year and cost the country \$442 million each year. "These emissions harm the young, the old and the already sick, make respiratory and heart conditions worse, and damage our resistance to colds and flu," she said.

Ms Tizard said the Government had already implemented measures to reduce emissions by ordering improved fuel specifications and tighter requirements for imported vehicles.

The police were also ticketing smoky vehicles.

Transport Safety Minister Harry Duynhoven said vehicles which emitted visible smoke needed maintenance. "Poorly maintained vehicles emit up to 10 times more pollutants than a well-maintained vehicle," he said. "If your vehicle is well-maintained you'll be saving on your fuel bills as well as reducing emissions."

49. South Korea to Revise Air Quality Standards

South Korea is planning to amend its benchmark environmental standards for air quality under its umbrella environmental law, a move that will bring the rules more in line with U.S. and European standards. According to a proposal made public by the Environment Ministry July 31, the enforcement decree of the Basic Environment Policy Act will be amended to raise air quality standards starting in January 2007, pending Cabinet approval, which is expected in September. Legal changes involving enforcement rules and regulations do not require parliamentary action.

The changes to the air quality standards under the basic law, including new restrictions on the benzene content in the air, will trickle down to lower-level laws over time.

The standard for particulate matter smaller than 10 microns in diameter, or PM-10, will be lowered from the current 70 micrograms per cubic meter of air to 50 micrograms, matching the U.S. Environmental Protection Agency standard.

The standard for nitrogen dioxide will be lowered from 0.05 part per million to 0.03 ppm, also about matching the U.S. EPA standard.

According to the ministry's data, PM-10 pollution in Seoul averaged 58 micrograms per cubic meter of air in 2005, while nitrogen dioxide content in the capital city averaged 0.034 ppm.

50. South Korea to Tighten Standards On Wide Range of Industrial Emissions

In the first major overhaul of industrial air regulations in 15 years, South Korea is now planning changes to emissions rules under the Air Quality Preservation Act to reflect advances in pollution control technology and shifts in the nation's industrial mix. On August 23rd, the Environment Ministry unveiled amendments that would stiffen emissions limits on sulfur oxides, nitrogen oxides, ammonia, hydrogen chloride, and other major air pollutants by 10 to 50 percent and reclassify industrial categories, eliminating some and adding others.

The current system of regulating industrial emissions dates from 1991, though standards were revised as recently 2000.

Once approved by the Cabinet, which is expected as early as September, the revised rules will take effect in January 2010 with a few exceptions. Updated emissions limits on gaseous and particulate pollutants from various types of industrial facilities will take effect in 2010, except for refuse-derived fuel and painting facilities, which face a compliance deadline of July 2007. Refuse-derived fuel, or RDF, is manufactured from waste wood, paper and plastic and is used as a coal substitute.

The revised rules will cover 27 industry categories, compared with the current 14. Semiconductors, liquid crystal displays, and RDF manufacturing have been added to the list.

The amendment also introduces new requirements for power plants, which are already heavily regulated, including limits on mercury emissions. Limits on nitrogen oxide emissions from utilities will be lowered to 100 parts per million in January 2010 from the current 250 ppm.

According to the ministry's 10-year simulation model for the 2009-2018 period, the benefits in terms of savings on health costs and productivity improvement will average KRW990 billion (\$1.03 billion) a year, far higher than KRW272 billion the industry will have to spend on upgrading facilities.

51. South Korea Offers Financial Incentives To Cut Greenhouse Gases

South Korea will offer cash grants to companies making voluntary efforts to cut greenhouse gas emissions starting in 2007 in anticipation of the country taking on mandatory emissions targets under the Kyoto Protocol in the treaty's second commitment period, 2013-2017. The Ministry of Commerce, Industry, and Energy (MOCIE) made the announcement on August 28th, citing increasing international pressure on South Korea to show a commitment to the U.N. Framework Convention on Climate Change as the world's 10th-biggest GHG-producing country.

"Businesses will be given fiscal incentives for their greenhouse gas reduction performance, starting next year," MOCIE said in a statement. Details on incentive payments will be fixed later after consultation with environmental experts and relevant ministries.

International talks on how to manage the Kyoto Protocol after the first commitment period of 2008-2012 have been under way since 2005.

South Korea and Mexico are the only members of the Organization for Economic Cooperation and Development that are not part of Kyoto's Annex I, which entails mandatory emissions targets. Non-Annex I countries, regarded as developing countries under the treaty, are not required to meet targets.

Government officials and environmental economists are voicing a growing sense of urgency in light of the South Korean economy's heavy dependence on energy-intensive industries such as steel and petrochemicals.

MOCIE wants to spur early action by businesses. Under its cash reward plan, recipient companies must register GHG reduction projects with the Greenhouse Gas Registry System set up under KEMCO in July 2005. Registration requires a feasibility evaluation by a MOCIE committee. The registry covers all of the six greenhouse gases regulated by the Kyoto Protocol, and the minimum annual reduction target is 500 tons of CO₂-equivalent emissions.

52. Japan Considers Extending Tax Incentives for Homes, Cars

Japan is considering tax reform proposals for fiscal year 2007 that include incentives for energy-efficient housing and an extension of relief provisions for low-emission vehicles that were due to expire next year. The Environment Ministry proposals included an extension of road, tonnage, and other automobile-related taxes to promote hybrid and fuel-efficient cars. They also would exempt bioethanol and biodiesel fuels. The Finance Ministry's Tax Commission traditionally compiles tax reform proposals by the end of the year, and the Cabinet then submits legislation to the Diet, Japan's parliament, in January.

53. China Eyes Europe And South America For Auto Export

Europe and South America are China's main targets for auto exports. In the first six months of the year, the value of the country's auto exports to the two regions rose by 520 percent and 117 percent year on year.

Statistics show that China's auto exports to Europe represent 21.5 percent of the country's total automobile exports. Europe now ranks second after Asia, with Africa third and South America fourth, Shanghai Securities News reported. From January to June this year, the value of China's auto exports to Asia and Africa grew by 113 percent and 34.6 percent year on year, the report said.

China reportedly exported 125,500 motor vehicles to 171 countries and regions during the period, a rise of 86.8 percent on the same period a year ago. The value of auto exports reached 1.255 billion U.S. dollars, up 115.1 percent year on year.

54. China Automakers See Profits In First Half Rise By 76 Pct

Automakers in China reported 17.14 billion Yuan (2.14 billion U.S. dollars) in total profits in the first half of the year, up 76.56 percent from the same period last year, according to the China Association of Automobile Manufacturers (CAAM). The automaking sector's profitability was the highest in the automobile industry which saw overall profits of 36.77 billion Yuan (4.6 billion U.S. dollars) in the six months, an increase of 59.58 percent over the same period last year.

Specifically, the profits in vehicle refitting, motorcycle making, engine production and auto parts sector went up 66 percent, 61 percent, 59 percent and 41 percent, respectively.

The CAAM said the new consumption tax which raised duties on large vehicles and cut taxes on small vehicles had helped sales since it was implemented in April.

Other factors in the profit growth were reportedly a steel price slump and the government's promotion of environment-friendly, low-emission cars.

All the automobile enterprises involved in the statistics are those which have an annual business volume of five million Yuan.

55. Commerce Minister Unveils 8 Auto Export Zones

Commerce Minister Bo Xilai has named eight cities as China's first batch of automobile export zones. At a ceremony in Beijing attended by Vice-Premier Wu Yi, Shanghai, Tianjin and Chongqing municipalities, as well as Changchun in Jilin Province, Wuhan in Hubei Province, Xiamen in Fujian Province, Wuhu in Anhui Province, and Taizhou in Zhejiang Province were named as the first eight zones.

The ministry and the National Development and Reform Commission also named 160 vehicle and spare parts manufacturers from these cities as the first batch of national automobile and spare parts exporting enterprises. Among these firms, 61 are foreign-funded companies, according to the ministry.

The long-awaited move comes amid the rapid growth of China's exports of vehicles and spare parts.

However, the industry's export volume remains small and domestic companies have been engaged in bitter overseas price wars.

Bo said that industry regulators would soon issue measures to help boost the nation's vehicle and spare part exports, and put the market in order. "Expanding the exports of vehicles and spare parts, especially our own brands and those with our own intellectual property rights, is the only way to enhance our auto industry's international competitiveness and enable China to turn from a major auto-making nation into a strong one," Bo said.

The auto sector should fully utilize markets and resources at home and abroad, and domestic manufacturers should become internationally competitive, he added.

China's vehicle and spare parts exports were worth US\$10.9 billion last year, up 34 per cent from 2004.

China produced 5.71 million vehicles last year and output is expected to reach 7 million this year. Meanwhile, the nation has more than 5,800 vehicle and spare parts manufacturers.

Domestic automakers mainly sell buses, trucks and low-end cars in overseas markets.

56. First Auto Finance JV Launched in China

Dongfeng Peugeot Citroen Auto Finance Co Ltd, the first auto finance company jointly established by a State-owned financial institution and auto manufacturers, has been launched in Beijing. Bank of China Group Insurance Co, a wholly-owned subsidiary of Bank of China, owns a 50 per cent stake in the joint auto financing company.

Dongfeng Peugeot Citroen Automobile and its partner PSA Peugeot Citroen, via PSA Finance Netherlands, both hold 25 per cent stakes in the company.

Rene Steffan, general manager of the joint venture, said that the new firm would support the China sales of the two joint venture auto brands Dongfeng Peugeot and Dongfeng Citroen, as well as sales of imported Peugeot cars.

About 50 per cent of Dongfeng Peugeot Citroen dealers are currently financed through banking institutions, with the total financing value since 1999 being in excess of 20 billion Yuan (US\$2.5 billion). Meanwhile, only about 10 to 15 per cent of new cars are sold through loans, due to the lack of comprehensive financial services and the absence of a sound credit system.

With the Bank of China's extensive network, the professional experience of PSA Finance Netherlands and the automakers' strong brands, more end-users can purchase cars through loans, Steffan said.

The auto financing company is expected to help Dongfeng Peugeot Citroen achieve its strategic target, said Liu Weidong, the firm's general manager. The company aims to get a 7 to 8 per cent share of China's passenger vehicle market by 2010, which is expected to reach six million units by that time. It sold 115,000 vehicles from January to July this year, with the sales for the entire year estimated to be over 200,000 units.

To cash in on the lucrative and potentially huge business prospects in the world's second-largest vehicle market, several global automakers have already started to offer car loans in China, such as General Motors, Ford, DaimlerChrysler, Toyota and Volkswagen.

57. Chery Plans to Move into Truck and Bus Markets

Chery Automobile, China's rising independent carmaker, is preparing to enter into the commercial vehicles sector to speed up its expansion, according to reports. The carmaker in Wuhu, a city in East China's Anhui Province, has formed a commercial vehicles unit based on a failed bus plant acquired from the nation's top vehicle producer First Automotive Works Corp (FAW) at the beginning of this year, according to these reports.

The bus plant, also located in Wuhu, was launched in 1993 by FAW and the local government with an investment of 470 million Yuan (US\$58.7 million). It has a manufacturing capacity of 2,000 buses and 30,000 chassis a year. But the plant hit severe financial trouble in 2002 due to sluggish sales.

Chery reportedly plans to start production of its own-brand commercial vehicles in 2008, aiming for an annual output of 300,000 units by 2010. It expects to reap 10 billion Yuan (US\$1.2 billion) in sales revenue from the commercial vehicles business annually in 2010, one-eighth of its overall turnover in the year.

According to Chery's website, it aims to boost overall sales to 1 million vehicles a year by the end of this decade from 189,000 units last year. The company currently makes low-cost cars under its own badge.

It has also set up a commercial vehicles engineering institute to develop new products. Commercial vehicles include trucks and buses.

Zhao Shengli, an auto analyst with China Galaxy Securities Co Ltd, said it's a "natural move" for Chery to enter the commercial vehicles market as it needs a broader product spectrum to achieve its ambitious sales target. "It therefore aspires to the commercial

vehicles sector. China's commercial vehicles market will continue to grow in the coming years, but competition has been very fierce with lots of players," Zhao told China Daily. He predicted demand for commercial vehicles in China would increase by 5 to 10 per cent annually in the years to 2010.

According to industry statistics, demand in the first half of this year stood at 1.02 million units, up 7.71 per cent from a year ago. "As a major home-grown brand, Chery can gain strong backing from the government and banks," Zhao said.

The company appears to have a sound cash flow as many investment banks are persuading it to list on the stock market, he added. Industry data showed that Chery's profits surged by three-fifths year-on-year to almost 112 million Yuan (US\$14 million) in the first half of this year on high sales growth.

The company sold 144,200 cars in the period, driving up its sales growth by 72 per cent. Brisk sales made it the No 6 Chinese vehicle group after FAW, Shanghai Automotive Industry Corp, Dongfeng Motor Corp, Chang'an Motor Corp and Beijing Automotive Industry Corp.

While Chery is an independent company, its bigger competitors all assemble foreign-brand cars.

Chery expects to sell more than 300,000 vehicles this year. Its current line-up contains micro cars, compact and mid-sized sedans, multi-purpose vehicles and compact sport-utility vehicles, which retail between 32,400 Yuan (US\$4,100) and 169,800 Yuan (US\$21,200).

The company is leading China's car exports. From January to June, it exported 13,548 cars, accounting for two-fifths of the nation's total car shipment overseas.

58. Study Links Hong Kong's Bad Air to Childhood Asthma

Hong Kong's bad air may be responsible for a significant jump in children being admitted to hospital for asthma, a six-year study has found. The study, published in the June issue of the medical journal *Clinical and Experimental Allergy* is certain to heighten concerns over the city's worsening air pollution.

Using hospital admission records in the years 1997 through 2002, researchers at the University of Hong Kong found that a total of 26,663 children were admitted into hospital for asthma during the six-year period. After days when pollutants such as nitrogen dioxide, ozone and respirable suspended particulates were especially high, the numbers of children admitted for asthma would rise by 13 percent on average, according to the study.

"Polluted air is triggering such bad asthma that they need to be admitted into hospital. (And these cases) are just a tip of the iceberg," Lee So-lun, honorary clinical assistant professor of pediatrics and adolescent medicine at the University of Hong Kong, said.

The children in the study were all under 18.

Lau Yu-lung, professor of pediatrics and adolescent medicine at the university, said children were far more vulnerable to bad air than adults. "A child's lungs and immune system are not as developed, and they only mature with time. Their ability to expel waste is also weaker, so they are more vulnerable," Lau said at a news briefing. They are also more active than adults and likely to spend more time outdoors even on days when air is bad.

59. China Aims to Triple Fuel Ethanol Output By 2010

China plans to more than treble its fuel ethanol output by 2010 to reduce the country's dependence on imported oil and to boost the income of hundreds of millions of farmers, according to a government official. Liu Qun from the National Development and Reform Commission (NDRC), the country's top planning body, told a biofuel conference that annual fuel ethanol output should top 3 million tons by 2010, up from 1 million tons last year.

Fuel ethanol should make up more than 5 percent of the country's gasoline consumption, compared with less than 2 percent now, the division chief from NDRC said at the conference organized by BBI International from the United States.

Liu said the government would continue providing financial support for the industry, such as tax breaks or subsidies.

China now has four government-sponsored fuel ethanol plants with total annual capacity of 1.02 million tons.

Beijing provides subsidies of about 1,300 Yuan (US\$163.6) per ton of ethanol to the four plants this year. They are also exempted from a 5.0 percent consumption tax and 17 percent value-added tax.

The plants use corn or wheat as feedstocks for fuel ethanol, blended into gasoline in nine provinces, such as Jilin, Henan, Anhui and Heilongjiang.

Liu said Beijing would expand the ethanol-blending areas to the central and western parts of the country.

Liu said in future Beijing would encourage the use of non-food raw materials, such as cassava, sweet sorghum and agriculture residues, as feedstocks. "The government will continue to support the industry. But it should not take away the land from grains production," he said. "We will only support converting part of our grains into ethanol as long as it does not threaten the grain supply."

Liu said the southern region of Guangxi, the country's largest cassava grower, would build fuel ethanol facilities for 1.0 million tons in the coming five years. NDRC will permit state-owned grain trader COFCO to build a 200,000 tons per year (tpy) cassava ethanol plant in the region, Liu said. COFCO's Vice President Yu Xubo told the conference it was seeking opportunities to set up non-grain ethanol plants in five provinces, including the one in Guangxi.

"The biofuel industry will boost the sales of farm products and increase incomes of farmers, which make up 80 percent of the country's population," Yu said.

Tianguan Group, one of the four government-sponsored fuel ethanol producers, said it would start building one of its five new ethanol plants this year. The 100,000-tpy plant in central Hubei province will use early rice as feedstock.

60. PetroChina Sets up Alternative Energy Division

PetroChina, China's top oil and gas firm, has set up a unit to develop alternative fuels to secure new energy sources amid high crude oil prices and dwindling domestic reserves, company officials have announced. An office of 10 people under PetroChina's exploration and production arm would focus on coal bed methane, oil shale and biofuels, before extending into renewable energy sources such as solar and wind power in the longer run, they said.

"The business will be extremely small. We will still highlight our main business, which has been keeping us very busy," spokesperson Cao Zhengyan said.

But high global crude prices and a growing shortage of oil and gas in the world's second-largest energy user have led Chinese state oil giants to look more closely at unconventional fuels.

PetroChina had quietly laid groundwork for coal bed methane (CMB), a gas extracted from coal mines, having sunk 200 exploration wells in northern China's Shanxi province this year, a second company official said. PetroChina is aiming for commercial production before 2010, supplying 2-3 billion cubic meters of gas a year from fields mostly in Shanxi province.

The company has been working on the field in Shanxi for about a decade via a 50-percent-owned CMB specialist, China United Coalbed Methane Corp. Ltd., the second official said.

The new division, charged with project planning, would also work on biofuels, such as ethanol and biodiesel that are derived from plants or grains.

Analysts have said Beijing would need to use incentives such as tax breaks to encourage these new energy sources.

China is already the world's third-largest producer of ethanol, increasingly used as a gasoline blend. But the main producers have been local firms, while state giants like PetroChina have so far played an insignificant role.

61. 'Green' Buses Take To The Streets

Ten new environmentally friendly buses were recently unveiled by the Shanghai government. The buses are powered by 360 ultra-capacitors and are charged at bus stops with equipment attached to the roof of each vehicle along the No. 11 line, which has 10 stops around Laoximen in Huangpu District.

Each charge takes only 30 seconds and can power the bus for 3 to 8 kilometers.

Experts said the buses don't have any emissions since they are powered by electricity and that there is no need for unsightly wires overhead like other electric trolleys.

This represents the city's first step to upgrade buses that either cause air pollution or damage the image of Shanghai.

"The new trolley bus is a win-win solution for new transport," said Ma Xingfa, an official of the Shanghai Science and Technology Commission.

Working with a municipal fund of 15 million Yuan (US\$1.87 million) in the last five years, the science commission has teamed with a total of eight high-tech and transport companies to develop new buses.

They were produced by Shanghai Sunwin Bus Corporation - a joint venture between Shanghai Automotive Industry Group and Volvo Investment Corporation.

Each bus costs about 800,000 Yuan, according to the officials.

The 10 buses are operated by Shanghai Bashi Xinxin Automobile Service Company. The fare is 2 Yuan - the same as air-conditioned buses.

Chen Youkou, a senior engineer of the project, said: "The city government plans to gradually upgrade other buses."

There are about 20,000 buses, including 424 electric, in the city. The cost of an upgrade for each bus is about 200,000 Yuan.

Chen said the next step is to increase the power of capacitors so that they can run longer distances without a charge - particularly during rush hours.

He said the government also plans to gradually remove most overhead wires and power poles downtown.

Experts said maintenance will be about 80 percent cheaper compared to a conventional bus, creating strong market potential for transport operators.

Chen said the environmentally friendly buses have one major drawback - if they run at slow speed for quite some time, they lose power quickly.

62. Indian NGO Criticizes Vehicles and Fuels Road Map

The inability of the Union government to decide the date for the early enforcement of Euro IV standards limits the scope of what cities can do to reduce pollution according to the Center for Science and the Environment (CSE). The Auto Fuel Policy roadmap remains sacrosanct for the government and the oil and automobile industries; while the rationale for limiting the tighter standards to only a few big cities does not stand the test of reason any more, they noted.

When as many as 57 per cent of the cities monitored have critical PM10 levels (more than 1.5 times the standards), the preferential status for only 11 cities (selected by the government's Auto Fuel policy) cannot be justified. Newer and smaller cities are scaling the pollution peak and are more polluted than the big metros. These cities, with no wherewithal to address the pollution challenge, are being held to ransom by their fume-spewing, rapidly growing vehicle populations, said CSE. The current practice of keeping emissions standards lenient for the country is flooding smaller cities with outdated polluting technologies and fuels. If proactive action has helped to lower pollution levels in the selected cities, it only proves the need for nationwide action on an accelerated scale.

The Cabinet-approved Auto Fuel Policy had promised a review in 2006 to fix the date for the introduction of Euro IV emissions standards. It is already October and there is still no sign of a review. We must review the roadmap not only to fix an early date for Euro IV standards but also to set milestones for expanding the geographical influence of the improved standards.

CSE highlighted the risks -- if the highway and truck traffic that transit through cities are not cleaned up, cities cannot meet their pollution challenge. Also, dirty fuels outside the city limit will put at risk the investments in improved technologies in a few selected cities.

Unfortunately, CSE has learned from the grapevine that the sub-group on fuels for the eleventh Five-Year Plan has only endorsed the original Auto Fuel Policy proposal -- Euro IV for eleven cities and Euro III for the rest of the country by 2010. By not expanding the list of cities that must also implement Euro IV, the policy gurus are ignoring that air pollution has already become a national crisis.

The rapid increase of vehicles in cities is in serious conflict with city-based action. Cities will now desperately scramble for solutions as state-sponsored motorization will hit them hard. Worse, the massive investments planned under the 10-year Automotive Mission Plan, designed to make India an auto manufacturing and export hub, while ebullient on fiscal benefits, is more subdued on pushing investments towards clean technology. It is indefensible according to CSE that the government should be so willing to forego public revenue to build cleaner cars for the European markets but not for its own cities.

The Auto Mission Plan, recently tabled by the Union ministry of heavy industries, is careful to insulate investments from frequent changes in emissions norms. It demands a minimum gap of four years between each successive stage of emission norms. This, together with the delays on Euro IV, will only postpone the entry of cleaner technology in our polluted cities, said Anumita Roychowdry of CSE.

63. Indonesia's Pertamina Finally Goes Unleaded

Pertamina, the government-owned oil company in Indonesia, ceased adding lead in gasoline on 1 July 2006. This was confirmed by Arman Siswandi, a senior officer of Pertamina, in Jakarta on 5 September 2006. While no lead has been added during the production of gasoline it will take a number of months before all old stocks of leaded gasoline will be distributed and the pipelines in different parts of the country will be washed out.

The phase out of lead in Indonesia is the result of 9 years of advocacy by stakeholders led by Ahmad Safrudin, Coordinator of KPBB's Joint Committee for Leaded Gasoline Phase Out. Support from organizations such as the US Environmental Protection Agency which assisted in setting up the Indonesian Lead Information Center, have greatly helped in achieving the lead phase out from gasoline in Indonesia. Credit also goes to all the other organizations which have raised their voice in formal and informal meetings.

This news on the end of the production of leaded gasoline in Indonesia comes in the same week that a report on the 2006 fuel monitoring survey of gasoline and diesel fuel from gas stations in 20 cities in Indonesia concluded that lead levels in gasoline in Indonesia had already fallen significantly over the last 12 months. The fuel quality monitoring, jointly undertaken by the Indonesia Ministry of Environment and KPBB from May to August 2006, was released at a well-attended event in Jakarta. Results of the 2006 survey show that the average lead content in gasoline is 0.038 grams per liter. Compared to the 2005 average lead level of 0.133 grams per liter, lead levels in gasoline in 2006 have been reduced by 71.43%. Rachmat Witoelar, the State Minister of Environment; senior level officers from the ministries of energy, transport, industry, planning, and finance; Pertamina; city representatives; and civil society led by KPBB, were present at the launch of the 2006 fuel monitoring report.

64. Guangzhou Government May Lift Time Restrictions On Cars

Chen Lin, a deputy director of the Ministry of Commerce, told a forum in Guangzhou that the ministry is revising certain regulations so that the age of a vehicle would not serve as a criterion forcing the retirement of vehicles. The revisions could mean a driver would be able to drive a car as long as it met safety and emission standards.

Currently, owners are required to discard their vehicles within 15 years of its manufacture, no matter what condition it is in. Current regulations stipulate that car owners will have to pass two yearly inspections if they want to continue driving the same car after 15 years and four annual checks after 20 years.

The revision would first apply to private cars and cars designated for civil services.

Chen was quoted by Guangzhou Daily as saying that a detailed, revised edition would be posted on the ministry's website to solicit suggestions and might be circulated this year.

"The sharp increase in the number of cars on the road and the high levels of single-car emissions are the main causes of the huge amounts of air pollution," Chen was quoted as saying.

The in use standards for vehicle emissions were newly added requirements that could speed up the elimination of old types of high-emission vehicles and prod car manufacturers to upgrade their production.

Car owners welcomed the move as a more scientific way to approach car expiration rather than simply judging from age and mileage. However, they also raised concerns

that the new regulation might force an early retirement in less than 15 years if their cars fail to meet standards.

65. New Zealand to Launch Vehicle Efficiency Standards

On October 15th, New Zealand announced measures to improve the fuel economy of the country's vehicle fleet with the aim of reducing air pollution and carbon dioxide emissions. The government opted for a regulated, sales-weighted fleet fuel economy standard rather than setting fuel economy standards for individual models. The government noted that a fleet sales-weighted standard would spread the incentive to improve fuel consumption across all models, provide flexibility to the industry, and choices to consumers. The measures will apply to new cars as well as to most imported second-hand vehicles. Transport Ministry officials will work with the motor industry to develop the standard. Officials will also look at options for restricting the age of imported second-hand vehicles. Other work to be undertaken includes developing a vehicle fleet strategy to bring together the government's climate change, vehicle safety, and air quality initiatives; options for encouraging the uptake of fuel-efficient cars like hybrids; and mandatory labeling of vehicles for fuel efficiency.

66. New Vehicle Industry Supports Decisive Action On Vehicle Fuel Efficiency

The new vehicle industry is encouraged that the Government is making progress in addressing the fuel consumption and emissions levels of the country's vehicle fleet, but stresses that it's now the time for decisive action rather than endless review and discussion.

"We have a particularly dirty and inefficient vehicle fleet by OECD standards, and the longer we delay the legislative measures essential to bringing about an improvement, the further behind we will fall," said Perry Kerr, CEO of the Motor Industry Association (MIA). "There's more than enough evidence on the table to enable us to make some decisions right now."

A media statement by the Hon. Judith Tizard, Associate Minister of Transport, and the Hon. David Parker, Minister of Energy and Minister Responsible for Climate Change Issues, has signaled the Government's commitment to investigating various policy options to bring about a reduction in the amount of fuel consumed by the New Zealand Vehicle fleet. Included in the range of possible measures is a restriction on the age of second hand vehicle imports, and a sales-weighted fuel economy standard.

"The new vehicle industry totally supports these initiatives in principle," said Mr. Kerr. "In fact we believe that a 15% fuel efficiency improvement target over ten years could apply to the new vehicle market, with 2005 as the base year."

The MIA is not convinced however that such targets could realistically be applied to imported used vehicles. "The used importing business is so fragmented and many of its participants so transient that it would be an impossible job to maintain a meaningful database of the fuel economy of the multitude of different models and sub-models," said Mr. Kerr. "A strict rolling seven year age limit applying to all used imported vehicles would be effective enough."

Another concern is the exemption applying to heavy trucks. "At present any proposed measures will only apply to vehicles under 3.5 tons," Mr. Kerr said. "We struggle to understand the logic of this, as heavy trucks and buses are the greatest polluters and consumers of fuel on our roads.

Mr. Kerr went on to say that a vital component missing from this package was the introduction of incentives to increase the scrappage rate of older vehicles in the fleet. Mr. Kerr said that "in conjunction with improving the fuel efficiency of vehicles added to the fleet we must have policies that actively encourage older vehicles to be scrapped- just under 30% of the fleet (750,000 vehicles) as at December 2005 were 15 years or older and we should be giving owners of these old cars a cash incentive to have them scrapped and to buy a newer more fuel efficient model".

Mr. Kerr also highlighted an example of bureaucratic misunderstanding over the emissions issue. "To say that a small, fuel-efficient car like a Honda Jazz has the same harmful emissions as one with very high fuel consumption like a Ferrari is utter nonsense," said Mr. Kerr. "All other things being equal, exhaust emissions are in direct proportion to how much fuel is burnt, so fuel-efficient cars are to be encouraged for emissions reasons as well."

67. Tokyo Seeks Automakers' Help for Medical Costs

The Tokyo municipal government has indicated it will seek compensation from truck manufacturers to cover the medical expenses of patients with respiratory ailments linked to vehicle emissions. "We are holding preliminary talks with the Japan Automobile Manufacturers Association," Sei-ichiro Hiraoka, an official of the Planning and Coordination Division of the Governor's Bureau said on October 4th. Tokyo's efforts to establish the compensation scheme may be in response to an ongoing class-action lawsuit in which 633 plaintiffs are seeking ¥15 billion (\$129 million) in compensation for respiratory problems. The Tokyo High Court issued a first-stage ruling in October 2002 ordering the government to pay damages to 7 patients living by major roads, but the court stopped short of holding automakers liable. The original lawsuit was initiated in May 1996. The industrial city of Kawasaki, just south of Tokyo, is currently covering 90 percent of medical costs for patients with pollution-related respiratory problems.

68. Calcutta High Court Concerned About Night Pollution

A Public Interest Litigation (PIL) has brought into focus how nearly 40,000 trucks enter the city every night, discharging pollutants into the air. The pollution levels are especially high in winter, often four times higher than the "safe limit". In response, a Division Bench of the Calcutta High Court asked the state government to file an affidavit on the issue within three weeks. The Division Bench of Chief Justice V S Sirpurkar and Nadira Patherya also expressed dissatisfaction over the state government's failure to file an affidavit until now, although 15 months have passed since the earlier order was passed.

The writ petition has been filed by Subhash Dutta, an environmentalist. It states that 40,000 heavy-loaded vehicles enter the city every night, causing severe air pollution.

Earlier, an expert committee had submitted a report on the issue to the Green Bench of the High Court stating that air pollution during the night is much higher than in day. The

expert committee had quoted a World Health Organization (WHO) report of 1995, which stated that the city had recorded 5,726 cases of air pollution related premature deaths. The figure for hospitalization of air pollution-related cases was 3 million in 1991-92.

After hearing the writ petition in July 2005, the court had directed the state government to file an affidavit within four weeks. But no affidavit has been filed so far. No state government counsel was present at the recent hearing either.

69. Toyota, Nippon Oil, Petronas to Make Biodiesel

Japan's largest refiner, Nippon Oil Corp., and auto giant Toyota Motor Corp. plan to develop biodiesel from palm oil with Malaysian state oil firm Petronas, according to a Japanese newspaper. The companies will start a joint development study in 2007 and begin producing palm oil-based biodiesel in 2009 for test bases in Malaysia, the Yomiuri Shimbun evening edition reported.

For the study, Petronas will supply palm oil and Nippon Oil will develop refining technologies to convert it to biodiesel for automobiles. Toyota will check if the developed fuels are safe to use for car engines, the paper said.

The companies will decide when they can commercialize the product and the volume of production based on the study.

Malaysia, the world's top producer of palm oil, has approved about 52 projects to turn its crude palm oil into biodiesel, known as B100. It is sold to oil firms or retailers for blending with crude oil-derived diesel and used in conventional engines.

Japan, the world's third-largest oil consumer, will set out nationwide biodiesel standards by the end of this year in an effort to kick-start demand.

Lagging international moves to use more biofuel to battle high crude oil prices and help ease global warming, Japan hopes the law -- allowing about 5 percent of fatty acid-derived fuel in diesel -- will spur more sales of green fuels made from renewable sources such as palm oil and sugar.

70. Asian Development Bank Outlines China Environmental Funding Strategy

On September 19th, the Asian Development Bank (ADB) unveiled a two-year lending strategy for China that outlines plans for more financing of environmental and energy efficiency initiatives. ADB said in its strategy and program update for China that reversing the loss of natural resources and integrating "the principles of sustainable development into country policies and programs" would be a key goal of the \$3 billion in lending it plans for the country in 2007 and 2008.

The bank said it would work with the government to strengthen the environmental regulatory framework, build capacity in local environment protection bureaus, and promote the use of clean coal technologies, cleaner energy production, and cleaner industrial processes.

ADB added that it would seek improvements in national environmental quality by providing more support for projects under the Kyoto Protocol's Clean Development Mechanism, which allows projects that reduce greenhouse gas emissions in developing countries to earn tradable credits that can be applied toward meeting targets in developed countries.

The bank has already given the green light to several environment-related lending projects, including bids to promote energy conservation in Guangdong province and to improve the water quality of rivers in Hefei and Nanjing cities.

71. Taiwan to Use Ethanol Blend in Government Vehicles

On September 26th, the state-run Chinese Petroleum Corp. (CPC) announced that Taipei will launch a pilot program next year to use ethanol-blended fuels for the Taiwanese capital's vehicle fleet. Gasoline containing 3 percent ethanol, dubbed "E3," will be available at five gas stations in the capital city. CPC officials said the ethanol will be either imported or produced by the state-owned Taiwan Sugar Co. CPC Vice President Kung Hsiang-yun told the state-run Central News Agency that about 80 percent of the automobiles sold in Taiwan after 2001, or roughly 1.17 million vehicles, can run on low-level blends. Officials forecast that the mixed fuel will be 1-2 percent more expensive than conventional fuel. The pilot program will be expanded to Kaohsiung, Taiwan's second-largest city, in 2009. The government is also considering incentives to promote blended fuels for the retail market. In June 2005, Taiwan's Second National Energy Conference called for the promotion of low-level ethanol-blended gasoline by 2010. According to the Bureau of Energy, research and development projects aiming to efficiently obtain ethanol from the island's traditional crops, such as sugar cane and ipomoea, have been initiated.

72. Only CNG Buses to Operate in Seoul in 2010

The Seoul Metropolitan Government plans to allow only buses that run on compressed natural gas, known as CNG, on the streets of Seoul beginning in 2010. The measure is intended to reduce pollution.

Currently, 2,798 of Seoul's 7,766 registered city buses are CNG buses, and the rest are diesel-powered vehicles.

The city government will invest 96.8 billion won to adopt to environmentally friendly buses and provide bus operators with 22.7 million won in subsidies for every CNG bus purchased. CNG buses costs about 94 million won per unit, compared to 67.7 million won for a diesel bus.

73. Australia Proposes Mandatory Reporting Of Industrial GHG Emissions

On October 10th, the Greenhouse Office of Australia's Environment Department released a draft proposal for a mandatory company-level greenhouse gas emissions reporting scheme. The proposal was developed at the request of the Council of Australian Governments (COAG), which comprises the prime minister and state and territory leaders.

The proposal is open to public comments through October 30th. The proposed start date for the scheme is July 1, 2008, with first reports due by the end of October 2009.

Under the proposal, reporting thresholds would gradually be tightened over a three-year period. In year one of the scheme, companies generating more than 125 kilotons of carbon-dioxide-equivalent (kt CO₂e) in direct and indirect emissions or using more than 500 terajoules (TJ) of energy would need to submit reports. Starting in year three, companies that emit more than 50 kt CO₂e or use more than 200 TJ of energy would need to report.

The company thresholds would be backed by a site-specific threshold that would apply from year one requiring a business to report company wide emissions if any one of its sites emits more than 25kt CO₂e or uses more than 200 TJ of energy.

Companies would be able to report emissions on either a financial-year or calendar-year basis. Emissions would be reported through the national online reporting tool already developed by the federal government.

A public database would disclose for each reporting company its total emissions and energy produced and consumed. Companies could also voluntarily disclose to the public additional information such as offsets and net emissions.

The proposal estimated that about 40 percent of companies that would trigger the proposed reporting thresholds do not yet report emissions or energy use under an existing program. These non-reporting businesses "may not have an active greenhouse and energy management plan in place," it said.

The proposal made no recommendation on whether the scheme should be introduced through stand-alone federal legislation or through template legislation implemented at the federal, state, and territory levels.

The COAG-backed GHG reporting model proposes reporting thresholds that are more lax than those suggested by the nation's federal, state, and territory environment ministers in June. Environment ministers proposed introducing reporting by adding GHGs to the list of substances reportable under the National Pollutant Inventory (NPI). The NPI proposal suggested a company threshold of 25 kt CO₂e, equivalent to 100 TJ of energy use, and a facility-level threshold of about 5 kt CO₂e.

State leaders indicated in the July COAG statement that they would proceed with the NPI option if a satisfactory model does not emerge through the COAG process.

SOUTH AMERICA

74. Colombia Drafts New Vehicle Emission Standards

Colombia is considering a law that would tighten emissions limits for vehicles and specify the devices and procedures to measure emissions. The rules for gasoline, diesel, and motorcycle engines are contained in Colombian Technical Norms (NTC) 4983, 4231, and 5365 respectively. Ten percent of all newly imported or manufactured lots of

vehicles are to be tested. Vehicles that fail to meet the standards have ten days to come into compliance, or cannot be sold. The proposed law also includes a second set of limits that cover all vehicles now on the road. Public service vehicles, such as city buses, are required to undergo testing every year. Private vehicles must be tested every two years. Officials in the heavily polluted city of Bogotá have asked national authorities to require checks even more frequently. The law is to apply to all vehicles except for locomotives, those officially designated antiques, and those which operate on alcohol, electricity, or natural gas. It sets emission limits for diesel and gasoline vehicles and for motorcycles. The law would replace resolutions 005 of 1996, 909 of 1996, 1048 of 1999, 236 of 1999, 237 of 1999, and 0822 of 2000.

75. Shell Argentina Suspends Sale Of New, Higher-Priced Diesel

Royal Dutch Shell's Argentine subsidiary provisionally suspended the sale of a new line of diesel fuel products after the government introduced stricter requirements on launching petroleum products, according to a company statement. Shell Compania Argentina de Petroleo suspended the sale of Shell Diesel and a Shell V-Power Diesel -- a higher-priced, lower-sulfur diesel fuel -- six days after their launch.

It had been marketing V-Power Diesel at 1.649 pesos (53 US cents) a liter, 10% higher than the 1.499 pesos/liter for Pura Diesel, its next highest-priced diesel fuel. The price of Shell Diesel was in line with other prices. But the launch of V-Power Diesel prompted the government to introduce new requirements on bringing products to market. The Energy Secretariat issued a resolution requiring oil companies to seek pre-approval from the Department of Fuels for new products, a process that is expected to take 10 days.

The secretariat said the move would allow the Department of Fuels to carry out adequate control of the quality and sale of fuels.

Insiders said the move is part of the government's fight against inflation. President Nestor Kirchner is trying to cut inflation to less than 10% this year from 12.3% in 2005 in an effort to keep the economy expanding at an annual pace of 8-9% for a fourth year. Through different mechanisms, the government has kept a tight lid on domestic fuel prices since 2003, keeping them at 40-50% less than in neighboring markets.

Shell said in the statement--and a quarter page advertisement in major newspapers -- that it has "initiated the pertinent steps to once again offer the products in its service stations and in this way give back to the consumer the possibility to choose." It added that it wants to offer consumers "a fuel that protects diesel motors and the environment."

The company said V-Power Diesel meets consumer demand for higher-quality products and also future government requirements to cut sulfur content in fuels.

Oil companies complain that rising costs are narrowing margins because they cannot raise prices to compensate. They also say the price controls are discouraging investment to expand refining capacity, which is needed to keep pace with surging demand for diesel fuel and other products. The country is currently suffering a gasoil deficit because of dwindling output of light crude, a main feedstock for the product, and limited refining capacity. This has led refiners to step up imports of gasoil this year.

GENERAL

76. Debate Over Impact of Tougher Emission Norms On 2007 Truck Market

Global truck makers expect demand to soften next year following a surge in orders in 2006 as road haulers buy new fleets before strict new emission laws come into force, according to industry officials.

Fleet operators like long-distance haulers have this year rushed to buy vehicles exempt from complying with new laws that will clamp down on new truck emissions of diesel soot and nitrogen oxides (NOx) into the atmosphere. But the resulting boost in order books this year is due to tail off in 2007, industry officials said at the Hanover truck show.

Strong economic growth is likely to cushion the blow in an industry which saw markets contract sharply in 2001 and 2002, prompting truck makers to slash fixed costs.

DaimlerChrysler, the world's largest producer of commercial vehicles, is already gearing up for a tougher market by looking at efficiency gains rather than volume growth to achieve its return targets when the expected downturn comes next year.

Its trucks chief, Andreas Renschler, said he had become more optimistic about 2007. "Nevertheless, we expect to see a downward trend in the triad markets (North America, Europe and Japan), which will be less pronounced in Europe and somewhat stronger in the USA and Japan," he told reporters at the IAA truck show in Hanover.

Citing its own and Global Insight statistics, German automotive industry association VDA expects 2007 sales of heavy trucks above 6 tons to drop to 318,000 units from 333,000 in western Europe this year. Over the same time frame, it estimates NAFTA heavy truck sales to drop to 530,000 from 610,000 vehicles in 2006.

Entering into effect at the beginning of next month, Euro 4 requires all newly registered trucks in the EU to cut emissions of diesel particulate matter, or soot, by 80 percent and NOx by 30 percent compared to Euro 3 norms. In the United States, EPA '07 stipulates that all diesel engines produced starting next year must comply with cuts of 50 percent for NOx and diesel soot by 90 percent.

Another factor that helped spur demand in Europe this year has been the EU's mandate for digital tachographs to prevent the manipulation of driving records and rest times for haulers that threaten road safety.

While MAN's Commercial Vehicles business remains insulated from a contracting truck market in North America, where it has no presence, it doesn't rule out falling demand in Europe. In Europe "2007 may not reach the 2006 peak", MAN trucks chief Anton Weinmann said. "It will be nonetheless an extremely positive year for MAN Commercial Vehicles."

Some analysts however have pointed out that the fear of a downturn may be a bit exaggerated in Europe since many countries offer highway toll incentives to encourage truck operators to run fleets equipped with cleaner engines, which also enjoy higher resale values.

Paolo Monferino, head of Fiat's Iveco truck and bus unit, said the European truck market could very well grow next year. "It will be something in the region of 3 to 5 (percent)... I don't think there will be any major change in the industry. Overall, the European economy is relatively stable," he said.

77. Years of Breathing Dirty Air Ups Women's Death Risk

Women who live within 50 meters of busy roads face an increased risk of dying from a heart attack, stroke or other cardiopulmonary cause, according to a new study. Exposure to particulate matter -- the tiny particles emitted by automobiles, especially diesel vehicles -- is probably the cause for their increased mortality, according to Dr. H.-Erich Wichmann, director of the Institute of Epidemiology of the GSF-National Research Center for Environment and Health in Neuherberg, Germany.

Most studies on the health effects of pollution have focused on short-term exposure, Wichmann and his team note in the September issue of *Epidemiology*.

To better understand the relationship between long-term exposure to pollution and mortality, the researchers looked at roughly 4,800 women who had participated in studies of women's health during the 1980s and 1990s, when they were 50 to 59 years old. This allowed the investigators to study the effects of 10 to 20 years of pollution exposure, which they estimated by determining how far the women lived from major roads and the amount of nitrogen dioxide and particulate matter measured by nearby air monitoring stations.

During the follow-up period, 8 percent of the women died, 3 percent from cardiopulmonary causes. According to the team, women who lived within a 50-meter radius of a busy road were 70 percent more likely to die due to cardiopulmonary causes.

There is not much that people living close to heavy traffic can do to reduce their exposure to particulate matter, Wichmann noted in an interview, as the pollutant also finds its way indoors.

"The only effective measure is to reduce the concentration of these particles, and especially for Germany, the most effective way would be to use particle traps for diesel cars," he added. There has been discussion of requiring traps on newly built cars, he said, and to truly reduce the particulate matter it would also be necessary to retro-fit old cars with the traps as well.

78. Climate Expert Says World Has 10-Year Window to Act

A leading US climate researcher said at a recent conference that the world has a 10-year window of opportunity to take decisive action on global warming and avert a weather catastrophe. NASA scientist James Hansen, widely considered the doyen of American climate researchers, said governments must adopt an alternative scenario to keep carbon dioxide emission growth in check and limit the increase in global temperatures to 1 degree Celsius (1.8 degrees Fahrenheit).

"I think we have a very brief window of opportunity to deal with climate change ... no longer than a decade, at the most," Hansen said at the Climate Change Research Conference in California's state capital. If the world continues with a "business as usual" scenario, Hansen said temperatures will rise by 2 to 3 degrees Celsius (3.6 to 7.2 degrees F) and "we will be producing a different planet."

On that warmer planet, ice sheets would melt quickly, causing a rise in sea levels that would put most of Manhattan under water. The world would see more prolonged droughts and heat waves, powerful hurricanes in new areas and the likely extinction of 50 percent of species.

He reiterated that the United States "has passed up the opportunity" to influence the world on global warming but praised California for taking the "courageous" step of passing legislation on global warming last month that will make it the first US state to place caps on greenhouse gas emissions.

He said the alternative scenario he advocates involves promoting energy efficiency and reducing dependence on carbon burning fuels.

"We cannot burn off all the fossil fuels that are readily available without causing dramatic climate change," Hansen said. "This is not something that is a theory. We understand the carbon cycle well enough to say that."

79. Global Warming Taking Earth Back to Dinosaur Era

Global warming over the coming century could mean a return of temperatures last seen in the age of the dinosaur and lead to the extinction of up to half of all species, according to a UK scientist. Not only will carbon dioxide levels be at the highest levels for 24 million years, but global average temperatures will be higher than for up to 10 million years, said Chris Thomas of the University of York.

Between 10 and 99 percent of species will be faced with atmospheric conditions that last existed before they evolved, and as a result from 10-50 percent of them could disappear. "We may very well already be on the breaking edge of a wave of mass extinctions," Thomas told the annual meeting of the British Association for the Advancement of Science.

Scientists predict average global temperatures will rise by between two and six degrees centigrade by 2100, mainly as a result of the heat-trapping carbon dioxide being pumped into the air from burning fossil fuels for transport and power.

"If the most extreme warming predicted takes place we will be going back to global temperatures not seen since the age of the dinosaur," Thomas said.

"We are starting to put these things into a historical perspective. These are conditions not seen for millions of years, so none of the species will have been subjected to them before," he added.

Thomas said scientific observations had already found that -- as predicted by the climate models -- 80 percent of species had already begun moving their traditional territorial ranges in response to the changing climatic conditions.

"That is an amazingly high correlation. It is a clear signature of climate change," he said.

Not only had the animals, birds and insects started to react, but there was evidence vegetation was also on the move.

For example, climate-triggered fungal pathogen outbreaks had already led to the extinction of more than one percent of the planet's amphibian species, Thomas said. Not only would some species simply find no suitable space to live anymore, but there would be confrontations with invasive species being forced to move their territory. This would produce not just wipe-outs but species' mixtures never seen before. And the changes would all happen at a faster rate than ever before in evolution.

"In geological terms 100 years is effectively instantaneous," Thomas noted.

80. GEF Meeting Outlines Funding Plans, New Areas of Focus

The Global Environment Facility (GEF) will have \$3.13 billion to support projects that implement international environmental agreements over the next four years, but it nevertheless is facing tighter resource constraints, delegates were told at the GEF's quadrennial leadership meeting on August 29-30.

The international funding body's 32 donor countries agreed to the budget, the largest commitment yet, in advance of the meeting. The money will be used to finance environmental projects in developing countries in the GEF's six focus areas: climate change, biological diversity, ozone depletion, water pollution and scarcity, land degradation, and persistent organic pollutants (POPs).

GEF Chief Executive Monique Barbut told a press conference the agreement to replenish the funds signaled a "firm commitment to protecting the global environment." However, delegates attending the meeting also heard that the funding level represents a decrease in real terms from previous commitments, in part because the figure includes existing unspent funds, while both the complexity and severity of global environmental problems is increasing. GEF will therefore seek more financing from the private sector and from government development funds for GEF projects.

Since its inception in 1991, GEF has allocated more than \$6 billion to fund more than 1,800 projects in 140 countries, which has in turn leveraged a further \$20 billion in co-financing. Its projects are managed by the U.N. Development Program, the U.N. Environment Program (UNEP), the World Bank, and regional development banks.

Barbut said that biodiversity and climate change had emerged as the two top priorities, together accounting for nearly 65 percent of GEF-funded projects. Barbut added that there needs to be a greater focus on finding ways of adapting to climate change in addition to preventing it. When the Conference of the Parties to the U.N. Climate Change Convention meets in November in Nairobi, it will discuss establishing an

adaptation fund to benefit developing countries affected by climate change, which the GEF would be the funding mechanism for, she said.

81. Arctic Sea Ice Shrinks, a Sign of Greenhouse Effect

Arctic perennial sea ice -- the kind that stays frozen year-round -- declined by 14 percent between 2004 and 2005, climate scientists have announced, in what one expert saw as a clear sign of greenhouse warming. Researchers have been monitoring the shrinking polar ice cap with satellites since the 1970s. What is new, and remarkable to scientists, is that the decline has been observed in winter as well as summer.

"The greenhouse phenomenon is actually becoming apparent in the Arctic," said Josefino Comiso of NASA's Goddard Space Flight Center outside Washington DC. "The winter warming signal is finally coming out."

Perennial sea ice used to be fairly stable in the Arctic, with declines of about 1.5 percent to 2 percent per decade, Comiso said in a telephone news conference. But in 2005 and 2006, this perennial ice was 6 percent smaller than the average amount over the past 26 years. Another NASA team based at the Jet Propulsion Laboratory in Pasadena, California, used a satellite to calculate that Arctic perennial sea ice shrank by 14 percent between 2004 and 2005.

Summer sea ice has also declined dramatically in recent years, but 2006 is unlikely to eclipse 2005's record for summer ice-melt at the top of the world because of the cooling effects of a particularly stormy August, said Mark Serreze of the National Snow and Ice Data Center in Boulder, Colorado.

September is the month when sea ice is at its lowest ebb in the Arctic, making it a good time to gauge the health of the system of freezing and melting around the North Pole.

"What we're seeing now is that the health of the system is not particularly good," Serreze said.

A satellite image showed Arctic sea ice shrinking away from its normal summer boundaries. One image showed a strange big hole in the summer ice north of Alaska. The hole, called a polynya, is probably about the size of the state of Maryland. Such a feature has never been seen in this area before, Serreze said.

Shrinking Arctic ice means less sunlight gets reflected and more gets absorbed, exacerbating the problem of warming. It also threatens Arctic species, notably polar bears, said Claire Parkinson, a research scientist at the Goddard center. The polar bear population in Canada's Hudson Bay has dropped from 1,200 in 1989 to about 950 in 2004, a decline of 22 percent, Parkinson said at the teleconference. Polar bears typically hunt on Arctic ice, but when ice is depleted, they will forage on land, she said. This has led to more sightings in Inuit settlements, but does not mean that the number of polar bears is increasing.

Environmentalists saw this research as more evidence of human-generated greenhouse emissions. "It is not too late to save the Arctic, but it requires that we begin to slow

carbon dioxide emissions this decade," James Hansen, director of NASA's Goddard Institute for Space Studies in New York, said in a statement.

82. WRI Says Environmental Commitment by World Bank Bears Watching

On the eve of the World Bank's annual meetings, the World Resources Institute released a policy paper that outlines concerns about the Bank's recent merger of its environment and infrastructure units. "The question is whether the Bank will implement its new approach in a way consistent with its promises," said Jonathan Lash, president of WRI. Obstacles to mainstreaming environmental considerations into Bank operations are elaborated upon in a 12-page WRI policy note, *Sustaining the Environment at the World Bank*.

In the June 2006 restructuring, the World Bank integrated its Vice President of Environmentally and Socially Sustainable Development and its Vice President of Infrastructure into one position: Vice President of Sustainable Development. "This reorganization raises a number of questions regarding how the Bank's safeguards framework will function without an independent vice presidency for the environment," said Smita Nakhoda.

The WRI policy note details how the evidence has never been stronger that protecting the environment is both compatible with the World Bank's development objectives and essential to achieving them. The Bank lends about \$20 billion per year in pursuit of its mission to fight poverty. But findings from the recent Millennium Ecosystem Assessment (MA) indicate that the Millennium Development Goal of halving the proportion of people in extreme poverty and hunger by 2015 cannot be met in the absence of more effective stewardship of the environment.

The MA is gaining currency among environment and development professionals and links improved ecosystem management and better governance of natural resources to opportunities for poverty reduction. In further recognition of the link between poverty and the environment, the G-8 has asked the Bank to take a leadership role in addressing climate change, which poses a particular threat to poor countries and communities.

In the long term, the impact of the Bank's recent reorganization and reaffirmation of its commitment to sustainable development will be demonstrated by changes in the Bank's overall portfolio, and changes in the Bank's positioning as a global leader on environmental issues, according to the report.

83. Models Suggest Stronger Link Between GHG Emissions, Hurricanes

Relying on nearly two dozen separate climate models, a team of researchers has concluded that man-made greenhouse gas emissions are the most likely culprit in warming global sea surface temperatures and prompting the recent upsurge in hurricane activity, according to a study² released Sept. 11. Using 22 separate climate models, the study, published in the *Proceedings of the National Academy of Sciences*, said increased greenhouse gases are the primary reason sea surface temperatures have increased nearly 1 degree Fahrenheit over the last 35 years. Warming sea surface

² "Forced and Unforced Ocean Temperature Changes in Atlantic and Pacific Tropical Cyclogenesis Regions,"

temperatures are thought to provide fuel for generating more intense and more frequent storms.

While recent research has blamed increased carbon dioxide and other greenhouse gas emissions at least partly on the rising sea surface temperatures, the authors of the new study said their efforts are the first to test the theory in such a broad array of climate models. The study published in the NAS proceedings is titled "Forced and Unforced Ocean Temperature Changes in Atlantic and Pacific Tropical Cyclogenesis Regions."

The researchers said their findings also cast new doubts on long-held theories that increases and decreases in hurricane activity are due mostly to multi-decade climate cycles driven by natural variables such as changes in wind shear, solar activity, and volcanic disturbances.

To conduct the study, researchers led by Benjamin Santer, a scientist with the Program for Climate Model Diagnosis and Intercomparison at the Lawrence Livermore National Laboratory, entered data in each of the 22 models to determine what effects various natural phenomena would have on sea surface temperature. The researchers concluded that none of those individual forces of natural variability could explain the rapid increase in sea surface temperatures that has occurred since the 1970s.

"In this study, we really eliminate those natural forcing factors as important--and that leaves human-induced factors" as the single most important contributor to changes in sea surface temperatures, according to Tom Wigley, a researcher with the National Center for Atmospheric Research and co-author of the study.

Wigley said the probability that the changes in sea surface temperature and increased hurricane activity were generated "by purely internal changes" in the climate system, and not by human activity, "are extremely small, perhaps 1 percent or less."

"The work we've done sort of closes the loop" on the question of whether human activity is a major factor in increased hurricane intensity, Wigley said.

Previous researchers have come to similar conclusions just in the past year on the role of human-generated greenhouse gases in triggering a rise in sea surface temperature that increases the intensity and duration of hurricanes. Wigley said the new study was the first to test that hypothesis in multiple climate models.

Wigley and other researchers said the study builds on previous research linking the effects of man-made greenhouse gases on sea surface temperatures by climate researchers including Kerry Emanuel, a professor of atmospheric science at the Massachusetts Institute of Technology. Emanuel and other researchers have noted a doubling in the number of category 4 and category 5 hurricanes over the past 35 years, from about 40 to 90, which correlates with an increase in worldwide carbon dioxide emissions. A category 4 storm ranges from 131 miles per hour to 155 miles per hour, while winds in a category 5 storm may top 156 miles per hour.

Interest in the potential link between global warming and hurricane activity was heightened by the 2005 record-setting hurricane season, which included 28 named storms and five hurricanes, according to the National Oceanic and Atmospheric

Administration. Seven of the 2005 hurricanes were considered major, and four of those seven resulted in record damage in Louisiana and other states along the Gulf of Mexico.

84. Thawing Lakes in Siberia Seen Releasing More Methane Than Expected

Thawing lakes in Russia's vast Siberian region are releasing greater amounts of methane, a potent greenhouse gas, than had previously been expected, according to a study published September 7th in the journal *Nature*³.

Scientists from Russia and the United States said they developed a new method for measuring ebullition, or the bubbling of methane emissions, and applied this method to study two lakes in northern Siberia. "We realized that our previous estimates were missing a very large and important component of lake emissions--in these bubbles were the dominant source of methane from lakes," lead author Katey Walter, of the University of Alaska at Fairbanks, said in a statement.

The researchers studied a unique type of permafrost in Siberia, called yedoma, which contains large amounts of carbon in the form of ancient dead plant material. The plant material thaws and falls to the bottom of lakes during the summer months, where it eventually decomposes and forms methane. The gas bubbles to the lake's surface and into the atmosphere, according to the study. The researchers estimate that the process was responsible for about 95 percent of methane emissions from two lakes studies, and that the overall rate of emissions is as much as five times greater than previously thought.

Applying those results across the northern Siberia, the study concludes that actual methane emissions are between 10 percent to 63 percent greater than previous estimates. If warming trends continue, researchers say emissions will reach even higher levels.

"Permafrost models predict significant thaw of permafrost during this century, which means that yedoma permafrost is like a time bomb waiting to go off," Walter said. "This newly recognized source of methane is so far not included in climate models," she added.

Methane accounts for about 17 percent of man-made greenhouse gas emissions, second only to carbon dioxide. About 40 percent of methane emissions come from natural sources, mostly wetlands, according to the U.S. Environmental Protection Agency.

85. High Arctic Winter Temperatures Trigger Further Loss of Sea Ice

NASA satellites have observed dramatic losses in winter ice formation in the Arctic, with the peak levels of sea ice about 6 percent smaller in 2005 and 2006 than the 26-year average, NASA researchers announced Sept. 13.

³ Methane Bubbling from Siberian Thaw Lakes as a Positive Feedback to Climate Warming

"This amount of arctic sea ice reduction the past two consecutive winters has not taken place before" in the 27 years such satellite data have been available, according to Joey Comiso, a research scientist at NASA's Goddard Space Flight Center.

NASA researchers said previous research already had shown declines in peak summer ice, but the declines now seen in winter ice provide further confirmation of a link between human-generated greenhouse gases and global warming.

"Computer simulations of the climate warming effect of greenhouse gases had predicted that winter sea ice would decline faster than summer sea ice," according to the NASA report. However, until two years ago, satellite data continued to show only a small decline in the retreat of winter sea ice, about 1.5 percent per decade, the report said⁴.

The total amount of arctic sea ice typically begins to decline from June through the second week of September and then begins to slowly increase through the darker winter months as temperatures decline. The total mass of arctic sea ice grows to nearly 6.2 million square miles in the winter before retreating again in the summer, according to NASA.

Declining sea ice could have far-reaching effects on the global climate and various species, including polar bears, who hunt for seals and other prey from the ice, researchers said.

Climate scientists say the arctic sea ice plays a key role in moderating global temperatures because the ice reflects a significant portion of the sun's energy back into space. A decline in such sea ice means the darker ocean would absorb more of the sun's energy and help accelerate global temperatures.

86. Greenland Ice Sheet Melting Faster - Study

Greenland's massive ice sheet is melting much quicker than scientists had estimated and the pace has accelerated lately, according to new research. An analysis of satellite observations shows the rate of ice loss rose 250 percent between the periods April 2002 to April 2004 and May 2004 to April 2006, most of it in southern Greenland.

The ice sheet is now shrinking by about 248 cubic kilometers each year which is equivalent to a rise in sea level around the world of 0.5 millimeters.

The findings, based on data from the Gravity Recovery and Climate Experiment (GRACE) satellite, and published in Nature magazine, are consistent with earlier results showing increased melting due to rising temperatures blamed on global warming.

Scientists predict that global average temperatures will rise by between one and six degrees Celsius this century unless urgent action is taken now to cap and reduce carbon emissions. A rise of three degrees could cause a large rise in sea levels, loss of species and increase famine and disease.

⁴ Arctic Sea Ice Hitting Major Lows in Wintertime

Greenland's ice sheet is so huge that if it melted entirely sea levels across the world would rise by about 7 meters, Tavi Murray of the University of Wales in Swansea said in a commentary on the research. Murray believes the GRACE results could help scientists re-evaluate the rates of loss that can be expected from global warming.

87. WHO Says Pollution Kills Two Million People Each Year

The World Health Organization called on governments to improve air quality in their cities, saying air pollution prematurely kills two million people a year, with more than half the deaths in developing countries. Reducing PM10 could save as many as 300,000 lives every year, according to a statement issued by the WHO's regional office in Manila.

PM10 pollution is caused primarily by the burning of fossil and other types of fuel. Its particles are too small to be filtered in the nose and throat, and they settle in the lungs where they cause health problems.

The WHO said that in many cities, the average annual levels of PM10 exceed 70 micrograms per cubic meter while recent new WHO guidelines called for lowering that level to less than 20 micrograms to prevent ill health. That could cut the deaths from air pollution by about 15 percent, said Maria Neira, the WHO director for public health and the environment. It could also cut the global burden of disease from respiratory infections, heart disease and lung cancer, she said.

Particulate matter pollution is considered the biggest health risk. But the WHO Air Quality Guidelines also recommended lowering the daily allowed limits for ozone from 120 down to 100 micrograms per cubic meter (yard). That represents a challenge especially for developing countries with numerous sunny days when ozone concentrations reach the highest levels, causing respiratory problems and asthma attacks, WHO said.

The Air quality guidelines for the first time address all regions of the world and provide uniform targets for air quality. These targets are far tougher than the national standards currently applied in many parts of the world - and in some cities would mean reducing current pollution levels by more than three-fold.

Given the increasing evidence of the health impact of air pollution, WHO revised its existing Air quality guidelines (AQGs) for Europe and expanded them to produce the first guidelines which are applicable worldwide. These global guidelines are based on the latest scientific evidence and set targets for air quality which would protect the large majority of individuals from the effects of air pollution on health.

"These new guidelines have been established after a worldwide consultation with more than 80 leading scientists and are based on review of thousands of recent studies from all regions of the world. As such, they present the most widely agreed and up-to-date assessment of health effects of air pollution, recommending targets for air quality at which the health risks are significantly reduced. We look forward to working with all countries to ensure these Guidelines become part of national law," says Dr Roberto Bertollini, Director of the Special Program for Health and Environment of WHO's Regional Office for Europe.

Air pollution, in the form of particulate matter or sulfur dioxide, ozone or nitrogen dioxide, has a serious impact on health. For example, in the European Union, the smallest particulate matter alone (PM_{2.5}) causes an estimated loss of statistical life expectancy of 8.6 months for the average European.

For sulfur dioxide, the guideline level was reduced from 125 to 20 micrograms per cubic meter: experience has demonstrated that relatively simple actions can rapidly lower sulfur dioxide levels and directly result in lower rates of childhood death and disease. The guideline level for nitrogen dioxide remains unchanged at 40 µg/m³ averaged annually and 200 µg/m³ averaged over one hour; however, meeting these limits, which are essential to prevent the health consequences of exposure such as bronchitis, remains a great challenge in many areas where car traffic is intensive.

The guidelines also recommend that 24-hour average concentrations of PM-10 not exceed 50 µg/m³. For fine particles (PM-2.5), the WHO target is 10 µg/m³ on an annual basis and 25 µg/m³ averaged over 24 hours.

The worst-polluted cities for which data was available included Karachi, New Delhi, Katmandu, Beijing, Lima and Cairo.

They had around 200 micrograms of particulate matter or PM₁₀ per cubic meter -- 10 times the new standard, according to Michal Krzyzanowski, a WHO air quality expert who was technical coordinator for the project.

In Europe, Netherlands, Belgium and Milan, Italy, suffer the worst air pollution; while in the United States it is the north- eastern corridor as well as Los Angeles, WHO experts said.

88. Auto Pollution Linked With Increased Risk Of Heart Attacks

Pollution from automobile traffic is linked with a significantly increased risk of heart attacks, according to a study published on October 11th. An increase in traffic near the home was associated with a 4 percent increase in the risk of having a heart attack, and living near a major road was associated with a 5 percent increase, according to the study by six Massachusetts researchers.

The study⁵ was published online in *Environmental Health Perspectives*, a journal of the National Institute of Environmental Health Sciences. The six researchers were from the Harvard School of Public Health, Beth Israel Deaconess Medical Center, and University of Massachusetts Medical School.

"We observed a significant association between exposure to traffic near the place of residence and the occurrence of acute myocardial infarction," the study said.

The research team analyzed the pollution levels near homes of 5,049 people in Worcester, Mass., who had heart attacks between 1995 and 2003 and compared that information to pollution of 10,277 people who did not have a heart attack.

⁵ "A Case-control Analysis of Exposure to Traffic and Acute Myocardial Infarction"

Traffic volume and pollution levels were estimated by using a variety of sources detailed in the study, the researchers said, adding the results of this research warrant further investigation with more direct measurements of individuals' exposures.

Future research should examine poor populations to better understand whether the challenges they face make them more vulnerable to traffic-related pollution or whether their exposure tends to be higher, the paper said.

89. Environment, Energy Officials Discuss Future of Kyoto

Ministers and officials from 19 nations, including the Group of Eight industrialized countries as well as major developing countries, concluded two days of talks in Monterrey, Mexico on October 4th on the future of international commitments to reduce greenhouse gases under the Kyoto Protocol.

The closed-door meetings brought together environment and energy officials in an effort to iron out differences before a U.N. climate change conference that is scheduled to take place in Nairobi, Kenya on November 6-17.

The U.N. conference will consider what steps to take after the Kyoto Protocol's first commitment period expires in 2012. The existing agreement calls on developed countries to collectively reduce their greenhouse gas emissions by 5 percent from 1990 levels by the period 2008-2012.

Mexican Environment Minister Jose Luege said developing countries at the meeting expressed their need for more aid from industrialized nations in order to have access to cleaner technologies that would enable them to reduce emissions.

He said ministers discussed the need to allow more flexibility under Kyoto's Clean Development Mechanism (CDM), which enables projects that reduce greenhouse gas emissions in developing countries to earn tradable credits that can be applied toward meeting targets in developed countries.

Luege stressed the need for nations to make long-term commitments to fight global warming at the upcoming Nairobi conference to insure that CDM projects will continue to receive financing.

Attending ministers and officials agreed that the longer countries wait to significantly reduce greenhouse gas emissions, the greater the future environmental damage and economic costs will be, according to a statement released by the Mexican Environment Ministry.

90. UN Sees 'Far More Robust' Global Warming Evidence

Scientific evidence that human activity is heating the Earth has become "far more robust" in the last five years, the head of the United Nations climate change panel said. Rajendra Pachauri, chairman of the Intergovernmental Panel on Climate Change (IPCC), said an increase of research on global warming had added weight to the group's upcoming report, which is considered a mainstay for environmental policy-making.

"Some of the uncertainties that we had in the scientific evidence will be reduced. Our evidence will be far more robust," Pachauri told reporters in a telephone interview.

In its last assessment in 2001, the IPCC said there was "new and stronger evidence" that gases linked to human activities, mainly from burning fossil fuels in power plants, factories and cars, were the main cause of global warming.

Its next report, the first chapter of which will be launched in Paris on February 2nd, will group research by about 2,000 scientists on the drivers of climate change and its impacts on weather, disease, ecology and water supply.

Marked strengthening in the IPCC conclusions might pressure the United States -- which pulled out of the emissions-cutting UN Kyoto Protocol in 2001 -- to toughen its policies.

President George W. Bush aims to brake the growth of emissions, which were at about 16 percent above 1990 levels in 2004. The White House says it will seek to halt or reverse the rise "as the science justifies".

91. Scientists Eye Ethanol Boost For Gasoline Engines

Injecting small quantities of ethanol into car engines at moments of peak demand -- such as accelerating sharply or climbing a steep hill -- could improve the fuel economy of gasoline engines by 20 percent to 30 percent, a scientist said on Wednesday. A team of researchers at the Massachusetts Institute of Technology is working on the system, which scientists say would allow carmakers to use smaller engines in their vehicles, reducing weight and improving fuel economy at a lower cost to consumers than by adding a hybrid engine.

"To have a big impact on reducing oil consumption, one needs a low-cost way of improving efficiency, so a lot of people buy the car," said Daniel Cohn, senior research scientist at MIT in Cambridge, Massachusetts. He estimated that adding the ethanol injection system to a car would cost about \$1,000 and that cars using the new system could be in mass production by 2011.

"We view it as a very important near-term way to reduce oil consumption," Cohn said.

Volatile US retail gasoline prices -- which hit a record high above \$3 per gallon this summer but have since eased to around \$2.20 per gallon -- have piqued consumer interest in fuel-efficient cars.

But the limited supply of ethanol, which is made from plant matter, limits its usefulness as a primary fuel source. There are only 900 pumping stations nationwide that sell E-85.

The MIT scientists' plan gets around the ethanol supply issue by using small amounts of it -- so little that Cohn estimated the ethanol tank in cars using the technology would need to be refilled every three months or so. A turbocharger is added to produce more power. The ethanol injection system with the turbocharger would give a driver more power than a conventional engine of the same size.

The higher pressures and temperatures of a turbocharged engine can lead to a problem known as knock, which occurs when the fuel and air in the engine explode prematurely, hurting performance and potentially damaging the engine. Cohn said his group's technology avoids that problem by injecting ethanol into the engine when knock is likely to occur. The ethanol vaporizes and cools the fuel-air mixture, keeping it from exploding until the engine is ready.

92. Antarctic Ozone Hole Biggest on Record, US Reports

This year's ozone hole over Antarctica is bigger and deeper than any other on record, US scientists have reported. The ozone layer shields Earth from the sun's harmful ultraviolet rays, and the layer thins out over the South Pole each year, primarily because human-made compounds release ozone-eating chlorine and bromine gases into the stratosphere.

"From September 21 to 30, the average area of the ozone hole was the largest ever observed, at 10.6 million square miles," said Paul Newman of NASA's Goddard Space Flight Center outside Washington.

If the stratospheric weather conditions had been normal, the ozone hole would be expected to reach a size of about 8.9 million to 9.3 million square miles (23 million to 24 million square kilometers), about the surface area of North America, NASA said in a statement.

Scientists measure the total amount of ozone from the ground to the upper atmosphere in Dobson Units, and a NASA satellite detected a low level of 85 Dobson Units on October 8th of the East Antarctic ice sheet.

Scientists from the National Oceanic and Atmospheric Administration used balloon-borne instruments to measure ozone right over the South Pole, and by October 9th, the total ozone in a column from the ground to the upper atmosphere had dropped to 93 DU from about 300 DU in mid-July.

Temperature variations in the Antarctic stratosphere cause the severity of the ozone hole to vary from year to year. Colder temperatures result in larger and deeper ozone holes, while warmer temperatures lead to smaller ones. This year, the lower stratosphere was about 9 degrees Fahrenheit (5 degrees Celsius) cooler than average.

Concentrations of ozone-depleting chemicals in the lower atmosphere have been declining since 1995, and scientists estimate the ozone hole will be completely recovered by about 2065.