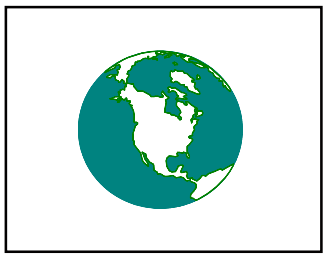
Michael P. Walsh
3105 N. Dinwiddie Street
Arlington, Virginia 22207
USA
Phone: (703) 241 1297 Fax: (703) 241 1418
E-Mail mpwalsh@igc.org
http://walshcarlines.com



CAR LINES

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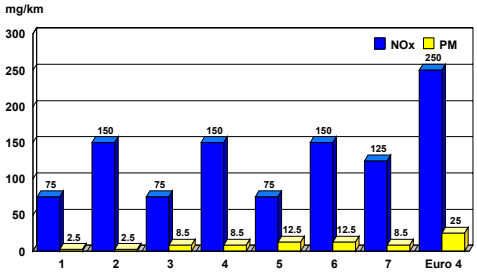
EUROPE

1. Commission Requests Input Regarding Possible Euro 5 Scenarios

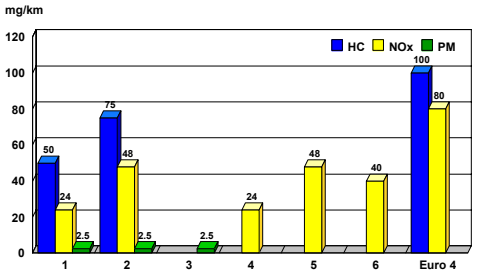
As part of the preparatory work concerning possible future emissions standards for passenger cars and light commercial vehicles, the EU Commission has developed and released a questionnaire to collect information from various stakeholders on the emissions reducing potential and associated costs of various options. Responses to the questionnaire will be accepted until April 30th.

Comments were requested on several scenarios as illustrated below. It remains possible that one or more of these scenarios will emerge later this year for possible use by individual member states for use with subsidies to stimulate early introduction.

Euro 5 Scenarios Proposed By Commission For Diesel Cars



Euro 5 Scenarios Proposed By Commission For Petrol Cars



2. Greens Press EU For More Car Pollution Curbs

The European parliament's Green delegation is pushing the European Commission to redouble efforts to cut pollution from cars. In a letter to President Romano Prodi and environment commissioner Margot Wallström, the group says the EU must in particular strengthen particulate emission limits. It wants an 80% tightening from the current maximum, to 0.0025 grams per kilometer by 2010. Fifty models on the market would already comply, it claims. The group also demanded that the EU limit maximum fuel consumption to 3 liters per 100km by 2010.

The latter draws attention “to an urgent health risk in Europe caused by motor vehicle pollution, in particular by fine particle emissions from road transport. Anthropogenic particulate emissions in Europe have been considerably reduced by a series of measures at the European and national level to limit sulphur content in fuels and to enhance the abatement technologies in large combustion plants. However, with a rapidly growing number of diesel engines in all vehicle classes, the concentrations of the most hazardous fraction of the particulate matter, thoracic particles which are able to enter the respiratory organs (observed as PM 2,5 and/or PM 10), are increasing again in many parts of Europe. These small particles cause a multitude of illnesses such as bronchitis, asthma, and cardio-vascular diseases.”

It notes a “recent study published by the German Environmental Protection Agency (UBA) [which] also explores the

benefits for measures in this field (Wichmann, June 2003). In light of the growth in the number of diesel engines, a new standard for particulate emissions from passenger cars and light vehicles is urgently needed. At the latest by 2010 the limit values for particulate emissions for new cars must be reduced to one tenth of those prescribed for 2005, which is to 0.0025 g/km. For heavy-duty vehicle the norm for new type approvals must be tightened to 0,002 in ESC test regime, and 0,003 in ETC test regime."

It further points out that the "technical solutions are already available. The automotive industry is well aware of the health problems related to particulate emissions from diesel engines and has developed both filters to retain or burn the particulates, and ways to optimize the combustion process. More than fifty car models already available on the European market would fulfill the standards proposed above. The costs of particulate filters are estimated between 400 and 600€. This is little compared to the health benefits."

Another equally pressing problem related to motor vehicle emissions is the increasing proportion of transport CO2 emissions of all greenhouse gas emissions in Europe.

Research on light vehicles demonstrates there is plenty of scope for reducing the weight of private cars and subsequently their energy consumption. The voluntary agreements in place at present between the car manufacturers and the Community do not allow Europe to fulfill its obligations under the Kyoto agreement and are a major contributor climate change. New mandatory limits are urgently needed and we call the Commission to swiftly introduce a requirement for fully equipped new cars to consume less than 3 liters/100 km. The absolute majority of Members of the European Parliament voted in favor of a 3-liter car standard for 2010 already in 1997. The Commission must act now and make that standard a reality.

The letter concludes that a "proposal for new EURO 5 emission norms for passenger vehicles is overdue. The Commission cannot claim to ensure a high level of human health protection in the definition and implementation of its policies when undisputed evidence shows that measures to limit particulate emissions from road transport would raise the life expectancy of millions of European citizens, among them many children who suffer from health problems such as bronchitis and asthma due to pollution which could be avoided by technology already available."

3. EU Optimistic On Vehicle CO2 Target

The European Commission has expressed continuing confidence that the EU can hit an ambitious 2010 target for cutting passenger car carbon dioxide (CO2) emissions, despite signs that the goal is slipping out of reach. Its statement came in the latest annual report on the EU's voluntary agreement with car makers on reducing CO2.

According to the report, average CO2 emissions from new European, Japanese and Korean cars sold in the EU was 166 grams per kilometer (g/km) in 2002. The figure is just 1g lower than in 2001, the slowest rate of progress since 1995 - the voluntary agreement baseline year -when average emissions were 186 g/km. Compared with average annual improvements of 1.5% since 1995, the three associations party to the deal will now have to achieve average 2% per year reductions to meet the voluntary agreement target of 140 g/km by 2008 (for ACEA representing European firms) or 2009 (for JAMA and

KAMA representing Japanese and Korean firms).

To meet the EU's parallel goal of achieving average 120 g/km emissions by 2010, the rate of improvement would have to reach 3.5% per year from now on. Even so, the Commission concludes, "it remains realistic to meet the objective by 2010 if the necessary measures are taken and all efforts are made".

The monitoring results show improved progress from JAMA and KAMA in 2002 and a slow-down from ACEA. European firms nevertheless remain in the lead and KAMA is still off-track. The Commission warned of a "real risk" that Korean firms would miss intermediate targets, and reiterated that legislation remains on the cards if the voluntary agreement fails.

A positive sign is rising sales of vehicles meeting the EU's 120 g/km target. Over 580,000 were registered by ACEA members in 2002, a nearly four-fold increase since 2000. JAMA registered a further 44,000.

Attempts to measure progress under the deal are complicated by uncertainties and overlaps in data and targets. This year, they have been worsened by a switch to government rather than industry-supplied monitoring data. European manufacturers have suffered most – ACEA would have reported a 2g fall to 163g in 2002 rather than stabilizing at 165g.

It also remains impossible to disentangle how far different measures are contributing to CO2 reductions. Car makers committed to achieving the 140g target mainly through technological changes and related market changes. The Commission is far from accepting that the progressive "dieselization" of Europe's car-fleet counts.

4. Germany Passes 3% Renewable Energy Share

The share of renewables in Germany's total energy consumption exceeded 3% in 2003, nearly double the level ten years ago, environment ministry statistics show. Renewables as a share of electricity reached 7.9%, almost exactly on track to meet Germany's 2010 target under the EU renewable electricity directive.

5. Switzerland: Government and Transport Companies Sign CO2-Agreements

A first group of 25 transport and construction companies have signed voluntary CO_2 agreements with Swiss government with the goal of reducing significantly their CO_2 emissions till 2010. The agreements are inside the framework of the Swiss CO_2 law and entitle companies to be exempt from a CO_2 tax whose level is to be decided by Parliament this summer. The estimated level of the CO_2 tax on transport fuels is around 0.2 US$ per liter of fuel. The agreements were brokered by the private sector energy agency and constitute a novel in the transport field. Grütter consulting, a Swiss based international consultancy specialized on transport and GHG emissions, managed the deals and assists the companies in their implementation. Smaller companies are bundled in groups (minimum requirement for an agreement is 4 million liters of fuel consumption per year) while large companies can get stand-alone agreements. The agreements are in line with Kyoto Protocol requirements for CDM project including a baseline, a Business As Usual projection (BAU) till 2012, independent external validation, and a monitoring and reporting system.

Average emission reductions to be achieved are around 20% comparing 2002 with 2010. This goal is achieved basically through the usage of bio fuels, a faster replacement of trucks and construction machines, the usage of larger trucks and optimization of logistics. Also soft measures such as training of drivers are included. Agreements are based on relative emissions (per output, measured e.g. by ton-kilometers for trucks). Monitoring is based partially on an electronic tracking systems installed in all trucks which records ton-kilometers driven. Agreements become binding when the CO_2 tax is enforced – this is planned to happen 2005. Companies or groups failing to achieve targets would need to pay back the CO_2 tax exempted from plus interests thus creating a large incentive to achieve targets. Till summer 2004 another 60 transport companies will have closed such an agreement with government accounting for around 200'000t CO_2 emissions per year.

6. Europe To Force Lower PAH Content Of Car Tires

Tire manufacturers will be forced to cut the amount of polyaromatic hydrocarbons (PAHs) in tires to negligible levels by the end of 2008, according to a new directive proposed by the European Commission. The legislation will impose a 10 parts per million (ppm) limit on the PAH content of extender oils used to make tires, subject to approval by the council of ministers and European parliament.

European tire producer lobby Blic supports the plan but criticized the Commission's timetable. Blic was disappointed the Commission had not endorsed the industry's self-declared goal to phase out low-PAH oils one year later, at the end of 2009. The time difference is significant because the new oils are so different in formulation that oil refineries and tire factories will need to make wholesale production line changes. Blic is also irritated that the rules have been proposed before tests to measure PAH content have been developed.

The new oils will cost two to three times more than current types, according to Blic, and the directive has been introduced even though EU scientists said last year that the new limits would have next to no effect on environmental concentrations of PAHs. In fact the price difference appears to be a key factor behind the move. European producers have already started to use the new oils and want EU rules to force importers to make the same move.

The restrictions will be introduced under the EU's 1976 marketing and use directive. Aircraft tires will be exempt because they are required to meet more stringent safety considerations. Tires for racing cars will have to implement the limits, but will have three extra years, until end 2011.

7. EU Measures On Light Van CO2 In The Pipeline

The EU is moving towards introducing measures to bring down carbon dioxide (CO2) emissions from light vans, the European Commission has revealed in its latest annual report on the EU voluntary agreement on reducing CO2 from passenger cars. In the report the Commission summarizes results from a recent study of CO2 from vans. Using various available technologies, the study suggests that CO2 emissions could be cut by as much as 23% by 2010 and 28.5% by 2015 compared with business as usual, though at an abatement cost of around €50 per ton of CO2 avoided.

Light vans emitted about 90m tons of

CO2 in the EU in 2000, compared with 420m tons from cars and 200m tons from heavy duty vehicles. The group's total emissions are growing, despite an ongoing improvement in specific emissions of about 1.2% per year.

In 2001, the European Commission proposed a directive laying down standardized rules for measuring van CO2 emissions and fuel consumption. It has still not been finally approved by the other EU institutions, though they have agreed to push back the deadline for mandatory monitoring from 2007 to 2009.

Though the directive and various research efforts are still not completed, the Commission is already considering measures, it has now revealed. These include emissions monitoring, labeling requirements similar to those for cars, plus unspecified "CO2 reduction measures". It gives no indication whether these could include a voluntary agreement along the same lines as the EU's existing one for passenger cars.

8. France To Issue Environment-Health Plan

The French government will publish an action plan in June on reducing health risks from environmental pollution, Prime Minister Jean-Pierre Raffarin has announced. Mr. Raffarin was unveiling a comprehensive report on environment and health issues by a commission of 22 scientific experts. According to the experts 7 to 20% of cancers can be attributed to environmental factors, including 4 to 8.5% that are workplace related. They call on the government to take action in 14 priority areas including air, water and soil pollution, radiation exposure and noise pollution.

The report's recommendations are grouped under prevention, improving scientific knowledge and research and raising awareness of environmental health issues. Proposed preventive actions include: reducing air pollution by installing particulate filters on all new vehicles and for all existing heavy vehicles, introduction of urban toll charges, and a scheme for employers to pay for half of employees' public transport costs.

It also recommends improving the public alert system during extreme climatic and pollution events (14, 800 people, mostly elderly, died in France during last August's heat wave) and increasing verification of emission controls by industrial installations such as petro-chemical plants and incinerators.

The government will release its action plan to coincide with a European ministerial meeting on environment and health in Budapest, Hungary. Simultaneously, an EU environment and health strategy is taking shape following proposals issued by the European Commission last June.

9. Norway Cuts Greenhouse Gases And Sulphur

Norwegian greenhouse gas emissions fell by 2.5% in 2002, but remained 6% above 1990 levels, against which the country is committed to no more than a 1% increase by 2008-12, the national statistics office (SSB) has reported. However, sulphur dioxide emissions were down 58% since 1990 and 10% from 2001 to 2002, marking achievement of Norway's national emission ceiling for 2010 under the 1999 Gothenburg protocol.

Emissions of ammonia are also below the Gothenburg limit, and levels.

10. New EU Members Seek Extra Time to Adopt Energy Taxes

The European Commission proposed Jan. 28 that the 10 new member states due to join the European Union in May should be granted a series of transition periods on EU energy tax legislation designed to set minimum rates and to help reduce greenhouse gases. The proposal, which must be approved by the Council of Ministers, is based on exemptions and transition periods that the 10 new EU member states requested, the Commission said.

"This proposal would allow accession countries equivalent opportunities for transitional arrangements before full implementation of the energy tax directive to those which existing member states enjoy," said Taxation Commissioner Frits Bolkestein. "Although some of the exemptions proposed would last a rather long time, all would be time-limited, and the extension of the directive to the 10 new member states will be a major step forward in the functioning of the internal market and in meeting environmental objectives.

"The main justification provided by the accession countries and accepted by the Commission for the differing transitional arrangements is the fact that the likely price increases if excise duties had to be raised by May 1, 2004, could negatively affect their economies and could in particular constitute a heavy burden for small and medium-size enterprises," Bolkestein said.

The Commission said its proposal was made on the basis of requests received from all the new member states due to join the European Union except Cyprus.

After more than 10 years of negotiation, the EU member states agreed Oct. 27, 2003, in the Council of Ministers to approve the directive that widened the scope of the EU minimum rate system which previously was limited to mineral oils. It now covers energy products including coal, natural gas, and electricity. In particular, the directive was intended to:

- reduce distortions of competition between member states as a result of divergent tax rates;
- reduce distortions of competition between mineral oils and the other energy products that were not previously subject to EU tax legislation;
- increase the incentive to use energy more efficiently (so as to reduce dependency on imported energy and cut carbon dioxide emissions); and
- allow member states to offer companies tax incentives in return for specific undertakings to reduce emissions.

The EU energy tax directive entered into force Jan. 1, 2004.

11. Rome Launches Program To Limit Traffic in City Center

On January 28th Rome's municipal government launched the country's first pilot project aimed at limiting traffic in the city center based on a vehicle's license plate number, an initiative that is being closely watched by other city governments as part of a broader effort to improve air quality in urban areas in line with European Union requirements. The plan, which was approved by city administrators Jan. 16, starts modestly, blocking cars and trucks with even-numbered license plates from entering a 150-square-kilometer (57.92-square-mile) "green area" between 3 p.m. and 7

p.m. local time on the opening day. The following week, vehicles with odd-numbered license plates will be blocked for the same period, with the restrictions continuing to alternate on a week-by-week basis after that.

Older vehicles such as cars without catalytic converters and diesel powered vehicles more than 15 years old will be barred from entering the green area at all times.

The green area includes the old part of the city, where air circulates less easily and there are smaller streets that can support less traffic.

The plan does not limit the movement of Rome's estimated 55,000 motor scooters and motorcycles, nor of delivery vehicles, taxis, public transport, or public service vehicles. Officials said they expect a 20 percent to 35 percent reduction in the number of cars in the green area during the four-hour period.

In conjunction with the initiative, the government also is promoting park-and-ride programs that allow commuters to park on the outskirts of the city and use reduced-price public transport into the city center.

Though city officials admit that the four-hour restriction each week will do little to improve Rome's overall air quality, they say it is an important first step that could see further traffic restrictions in the future. The plan also is being monitored by several other large Italian cities--including Florence, Milan, Naples, Palermo, and Turin, city officials said--to determine if such an initiative could yield results elsewhere.

The first day of restricted traffic met with mixed results. Many drivers were unaware of the restrictions and had to be turned around at the entry points to the green area, causing traffic to back up at several points.

Environmental groups mostly applauded the measure, but criticized it for not doing more to limit traffic from the beginning.

12. Hot Debate Over German CO2 Emission Allocation Plan

Negotiations on Germany's plan for allocating permits to emit greenhouse gases are threatening to break down, with the various parties at odds over how to interpret the business pledge to reduce emissions and over preferential treatment for certain types of fuel. Industry and energy sector negotiators and representatives from the Ministry of the Environment, Nature Conservation, and Nuclear Safety, and the Ministry for the Economy and Labor, have been meeting since October 2003 to try to reach agreement on the allocation issues. Negotiations came to a sudden halt at the Jan. 29 round, when the deputy environment minister presented a national allocation plan with emission quotas which the Economy Ministry had not approved; as a result, the deputy minister for the economy left the meeting.

Environment Minister Juergen Trittin released the 80-page draft national allocation plan the following day, Jan. 30.

The draft plan must be approved by all the ministries before the Cabinet can adopt it and send it to the European Commission by the March 31 deadline, as required by EU Directive 2003/87/EC on emissions trading. In Germany, the plan must then be approved by the Bundestag, the lower house of Parliament, where the Social Democratic-Greens coalition government holds a majority, although support of all the members of

Parliament is not guaranteed--particularly from the Green Party. Emissions trading is slated to begin Jan. 1, 2005.

Business representatives are upset over an adjustment factor in the draft allocation plan which requires firms in the industry and the energy sector to reduce their carbon emissions for 2005-2007 by 7.1 percent to 7.9 percent of emissions amounts for 2000-2002. One reason for the adjustment is that the system is supposed to create a reserve supply of emission rights, although it is not clear whether this reserve is to be granted as an additional amount of emission rights.

Although the Kyoto Protocol requires the European Union as a whole to cut carbon dioxide emissions 8 percent by 2012, based on 1990 levels, the Union's burden-sharing agreement requires many of the more industrial countries in the North (such as Germany and Denmark) to cut emissions far more aggressively than most of the member states in the less industrialized South.

Other energy-intensive firms, such as steel and chemical companies, warned that the reductions would hamper production levels.

Trittin supports allowing a firm that replaced an old power station with a new and more efficient facility to retain the emission rights for the prior facility, in order to reward firms which replaced high-emission facilities with more efficient facilities. However, new entrants to the market should have to have their emission rights based on those of a highly efficient natural gas and steam plant with state-of-the-art technology, regardless of what kind of fuel the new entrant actually used.

13. Spaniards Fight Over Allocation Of Carbon Emissions

As the deadline approached for producing a national allocation plan for emissions rights that complies with the Kyoto Protocol, sectors of Spanish civil society in early February all but admitted that meeting emissions standards would be impossible and presented conflicting views about how emissions allocations should or should not be implemented. As the government met with business associations to discuss a national allocation plan in late January and early February, labor unions and environmental nongovernmental organizations denounced the secrecy of these meetings and made public their own concerns about meeting Spain's emissions targets.

While Spain's chamber of commerce suggested the government pay the cost of emissions, the top labor union (Workers Commission) issued a report, *The Economic Impact of the Kyoto Protocol*, saying noncompliance and resulting emissions rights purchases would be a drain on productivity. Environmental groups demanded that the government not use public funds to compensate industry for failing to meet emissions targets.

EU Directive 2003/87/EC Establishing a Scheme for Greenhouse Gas Emission Allowance Trading within the Community requires member states to submit their national allocation plans to the European Commission by March 31. The plan must specify carbon dioxide emission limits for each industrial source within the country's total allowance for the EU trading scheme's first phase, 2005-2007.

The Spanish Confederation of Business Organizations (CEOE) has taken the position that the Spanish government, which signed the protocol, should pay

the cost of emissions rights. Without free emissions rights, many businesses could not survive, the CEOE said. The CEOE stated in its January bulletin that, while difficult to quantify the impact of Kyoto compliance on Spanish firms given that emissions rights needs and potential costs are still being evaluated, it could foresee "net transfers abroad of a significant sum."

As of 2002, Spain's greenhouse gas emissions had risen to 38 percent over 1990 levels, making it the industrialized country to most raise greenhouse gas emissions and the EU member state furthest from compliance with the Kyoto Protocol. According to the Carbon Sequestration Initiative, an industrial consortium formed to investigate carbon capture and storage technologies, Spain's carbon emissions will exceed its 1990 levels by 71 percent in 2010, putting it well over its target level of limiting the increase to 15 percent.

The government has indicated that an actual allocation plan is forthcoming, but it reportedly has asked the European Union for an extension of the March 31 deadline.

"Spain's National Allocation Plan, which has only consulted with business organizations to the exclusion of labor unions and NGOs, is being elaborated with no transparency whatsoever, in violation of the provisions of the European Commission and the directive [Directive 2003/87/EC] itself," stated the Workers Commission report released Feb. 2. According to that report, Spain will have to buy 113 million tons of CO_2 emissions rights each year for the period 2008-2012 because current government forecasts make Kyoto compliance "mathematically impossible." As a result, in its allocation plan, "Spain will probably assign 160 million tons of CO_2," the report said.

Somewhere between 57 percent and 62 percent of the CO_2 market might correspond to thermoelectric plants, between 8 percent and 10 percent to oil refineries and between 5 percent and 7 percent to the iron and steel industry, said the report. While the cement industry could take up somewhere between 16 percent and 18 percent of the market, the limestone industry could get somewhere between 1 percent and 1.5 percent, as would the paper industry, according to the report. Finally, between 6 percent and 7 percent of the CO_2 market could go to the glass and ceramics industry, it said.

Apart from demanding that the government work to meet the 2010 emissions target of 15 percent, WWF/Adena, the Spanish chapter of the World Wildlife Fund, demanded that the government "guarantee that it won't earmark public funds for the purchase of emission rights to compensate companies' failure to take responsibility with the measures necessary for reducing emissions."

14. EU Urged to Add Incentives, Remove Barriers to Renewable Energy

A European Union conference on environmentally friendly energy sources has called for EU institutions to push for regulatory and other actions aimed at increasing the percentage of European gross energy consumption that comes from renewable sources to 20 percent by 2020. German Minister of the Environment, Nature Conservation, and Nuclear Safety Juergen Trittin threw his support behind the recommendation, saying Jan. 21 that "ambitious goals" were necessary to maintain and strengthen the current growth dynamic of renewable energy consumption in Europe.

The recommendation was one of a series released following the conclusion of the European Conference for Renewable Energy, held in Berlin Jan. 19-21. The conference was organized by the European Commission as a predecessor to a world conference on renewable energy scheduled to take place in Bonn, Germany, June 1-4, 2004.

The preliminary conference addressed questions of renewable energy in connection with sustainable development, the security of energy supplies, economic development, job creation, and carbon dioxide reduction, among other topics, according to an official summary.

The conference conclusions specifically recommended eliminating administrative, grid, and market barriers to the introduction of energy from renewable sources, reducing subsidies for fossil fuel energy sources, creating support schemes with long-term financial security for investments in production, and financing instruments for market take-up of renewable energy.

Trittin noted in his statement that Germany had developed a legislative instrument for the market introduction of renewable energy in the form of a model of cost-based compensation for energy from clean sources, and that it had written the model into the draft law on renewable energy now before the country's Parliament. The model is increasingly gaining more advocates and imitators in Europe and elsewhere, he added.

15. EU Approves U.K. Excise Tax Break for Bioethanol

Reduced excise taxes on bioethanol fuel used in the transport sector in the United Kingdom are an acceptable form of subsidy because they comply with European Union environmental state aid guidelines, the European Commission ruled Feb. 3. Because bioethanol, manufactured from biowaste material such as trees, corn, or other agricultural material, is considered a renewable energy, the Commission said the reduced excise duties were necessary in order for the fuel to compete against hydrocarbon fuels such as oil, coal, and natural gas.

In the interest of promoting bioethanol as a way to help reduce greenhouse gases, the United Kingdom submitted a state aid approval request to the Commission antitrust authorities in order to lower the excise tax on bioethanol 20 pence (37 cents) below that of ultra-low sulfur and sulfur-free gasoline.

"The United Kingdom has successfully demonstrated that the excise duty reduction does not exceed the difference between the production costs of bioethanol and the market price of ultra low sulfur petrol," the Commission said in a statement. "In addition the British request meets another provision of the environmental guidelines because the reduced rate of tax is limited in time."

The excise tax reduction will begin as of January 2005 and last until Dec. 31, 2010.

The Commission said that currently, bioethanol is "neither commercially produced nor widely used in the United Kingdom but that with the reduced rate of tax British authorities hope it will stimulate the market for the new renewable energy."

Whether or not bioethanol provides a net benefit for the environment is a subject of controversy in the European Union. Many environmental groups insist that the amount of energy required

to produce biofuels such as bioethanol as well as land-use impact caused by growing the material for production negate the possible environmental benefits when it comes to greenhouse gas reduction.

16. Spain Adopts EU Required Ozone Pollution Measures

Spain's Council of Ministers (Cabinet) Dec. 26 approved a law to reduce ground-level ozone that brings the country into late compliance with the European Union Ozone Directive. The royal decree, for which a number is pending, transposes into Spanish law EU Directive 2002/3 Relating to Ozone in Ambient Air. Member states were called on to put into force regulations to comply with that directive by Sept. 9, 2003.

Under the new law, the public must be alerted when ozone levels exceed the so-called "alert threshold" of 240 micrograms of ozone per cubic meter of air averaged over one hour (down from the previous alert level of 360 µg/m3).

Spain has reported some of the highest ozone concentration levels in Europe, reaching 391 µg/m3 in June 2002 and 470 µg/m3 in November 2001. In the summer of 2002, three of the five exceedances of the alert threshold in Europe came from Spanish stations. (One "exceedance" represents a day on which a threshold is exceeded for at least one hour.)

With the new law, the government must also inform the public whenever monitoring stations detect ozone concentrations exceeding the "information threshold" of 180 µg/m3 (averaged over one hour) so as to inform sensitive sections of the population of potential risk. Moreover, it requires Spain's regional and local entities to monitor ozone levels and supply data to the Ministry of the Environment for evaluation. It also states the up-to-date information on concentrations of ozone in ambient air must be routinely publicized.

The timetable for compliance should be made available with the law's forthcoming enactment following publication in the *Boletín Oficial del Estado*, Spain's official journal.

The law sets ozone concentration level target ozone concentration levels for 2010-2013 (to protect human health) and 2010-2015 (to protect vegetation). One of the long-term human health protection goals of the new law is for the level of ozone to stay below 120 µg/m3 per maximum daily eight-hour mean within a calendar year. As of 2010, this level is not to be exceeded on more than 25 days per calendar year.

While adopting EU legislation, the new law takes as its legal base the 1972 Spanish atmospheric environmental law, which was implemented through Decree 833/75 and modified several times over the years to reflect EU air quality requirements. It revokes Decree 1494/1995, the Spanish law currently regulating ambient ozone levels.

Spain currently has more than 300 stations for measuring ozone and its precursors. Nonetheless, the government said that meeting the control, evaluation, and measuring requirements of the new law will require moving 51 stations, equipping 16 existing regional and suburban stations to analyze ozone and nitrogen oxides (NOx), and equipping another 25 stations with the ability to measure volatile organic compounds (VOCs). The government estimated that this will cost Spain's regional governments an estimated [Euros] 1.8 million ($2.27 million), but it did not present a time line

for spending or installation of equipment.

The new law comes after Spain's approval July 25 of a national emissions reduction program targeting sulfur dioxide (SO_2) and ammonia (NH_3), as well as two key ozone precursors, NOx and VOCs. Those substances are produced both by natural phenomena, such as forest fires and volcanic eruptions, and by human use of fossil fuels and industrial solvents.

One of the objectives of the National Emissions Ceiling program, which the Council of Ministers approved July 25, was the reduction of ozone in the lower atmosphere by cutting emissions from large combustion plants, improving transportation technology and other measures.

Under the new law, Spain's 17 Autonomous Communities are also expected to work toward ozone reduction goals, doing their part in meeting the national goal established by Madrid. In cases where there may be some cross-border pollution originating in another country, the regional governments are required to notify the Ministry of Foreign Affairs so that the central government can reach an agreement with the polluting nation.

The Spanish government Sept. 24 agreed to ratify the 1999 Gothenburg Protocol to Abate Acidification, Eutrophication, and Ground-Level Ozone, which is the final of eight protocols related to the 1979 Convention on Long-Range Transboundary Air Pollution.

17. Dutch Proposal for Trading Carbon, NOx Emissions Approved

The Dutch Cabinet approved a proposal designed to establish emissions trading programs for carbon dioxide and nitrogen oxides by 2005, and the government expects the proposal to become law before the end of the year, according to the Environment Ministry. The proposal, which was submitted by Environment Secretary of State Pieter van Geel in early 2003, was approved by the Cabinet Dec. 19 and sent to the Raad van State (Council of State) for its recommendations.

Contents of the legislative proposal will not be made public until the council makes its recommendations and the measure is put before the Dutch Second Chamber of Parliament, which is expected in May. The proposed program requires amendment of the Dutch Environmental Management Act, the Netherlands' framework environmental law.

The whole legislative process is expected to be finished sometime this autumn, and the Dutch government aims to have both the carbon dioxide (CO_2) and the nitrogen oxides (NOx) trading systems operational by January 2005.

Both emissions trading regimes will apply to firms operating in the Netherlands. The CO_2 trading regime will be based on the EU emissions trading rules cleared by the European Parliament in July, which is scheduled to begin Jan. 1, 2005. The separate NOx trading scheme is a strictly national program.

The proposal reportedly covers:

- general principles of emission trading by firms in the Netherlands;
- allocation of emissions trading rights;

- position and tasks of the Netherlands Emission Authority, the oversight body formed in 2002;
- monitoring and registration of emissions trades; and
- enforcement issues.

In addition, the legislative proposal also addresses the programs' relationship to the Dutch Environmental Management Act and to various international obligations. The Dutch Environmental Management Act provides the basic structure for the government's environmental policies and programs. The addition of the two emissions trading programs requires another chapter to be added to the framework environmental law. That 16th chapter will be devoted to emissions trading.

The Dutch government originally had considered establishing a NOx trading system only. However, once it was clear that an EU-wide CO_2 trading regime was imminent, the government decided to advance one measure proposing emissions trading schemes for both NOx and CO_2.

The NOx emissions trading regime will be restricted to the 230 industrial operations in the Netherlands with a thermal capacity of at least 20 megawatts. Thermal capacity is an indication of how much fuel a plant burns over a given period of time. Those 230 operations include primarily chemical factories, power plants, and petroleum refineries. Under the proposal, those operations will be restricted to 55,000 tons of NOx emissions starting in 2010, well below the 90,000 tons of NOx currently released.

The emission reductions are based on the Dutch commitments in the country's Fourth National Environment Policy Plan approved in 2001 under EU Directive 2001/81 on National Emission Ceilings for Certain Atmospheric Pollutants.

The Gothenburg Protocol, which is the final of eight protocols related to the 1979 Convention on Long-Range Transboundary Air Pollution, sets emissions ceilings for 2010 for four major pollutants: sulphur, NOx, volatile organic compounds (VOCs), and ammonia. EU Directive 2001/81 requires EU member states to reduce emissions that cause acidification and ground-level ozone, such as NOx, SO_2, VOCs, and ammonia.

With regard to CO_2, the Netherlands is required to reduce its emissions by 6 percent in line with the European Union's burden-sharing agreement. Under the Kyoto Protocol, the EU is required to cut CO_2 emissions 8 percent by 2012 from 1990 levels.

In addition, EU law (EU Directive 2003/87 Establishing a Scheme for Greenhouse Gas Emission Allowance Trading Within the Community) requires each member state to specify the total amount of CO_2 emission rights it proposes to allocate over the three years spanning 2005-2007. Those national allocation plans are to be submitted to the European Commission by March 31, 2004. The Dutch national allocation plan will be made public at that time.

18. U.K. Plans Ambitious CO2 Cuts, Industry Protests

Britain has announced that it would cut its carbon dioxide (CO2) emissions in excess of its international treaty obligations, prompting howls of protest from industry bodies but muted approval from generators. London said it aimed to cut CO2 emissions by 20 percent from 1990 levels by 2010 and at an initial rate

consistent with a 16.3 percent cut in the first phase from 2005 to 2007.

The proposals, part of a European Union–wide scheme, exceed Britain's obligation under the Kyoto Protocol on climate change to cut 12.5 percent off its 1990 levels. It has already cut emissions by about 8 percent.

Under the EU scheme, the government will set CO2 emission limits on around 1,500 installations responsible for half Britain's CO2 pollution — the National Allocation Plan — but will allow companies to trade the right to produce the pollutant to help meet their targets.

Environmentalists welcomed the stricter levels while the power industry, which will face even stiffer cuts, also expressed satisfaction because they are confident any extra costs they face will be recouped in higher power prices. However, other industry groups condemned the move. Industrial consumer lobby the Energy Intensive Users Group said it would lead to uncompetitive electricity prices and force companies overseas. The government conceded there would be price rises but said the U.K.'s main competitors in Europe also faced higher costs.

"Our projection is that industrial electricity prices will increase on a reasonably conservative set of assumptions by something like six percent, not just in the U.K. but in the major European industrial economies," Energy minister Stephen Timms told reporters at a meeting in London.

UK power prices have rallied recently in anticipation the emissions targets will force coal generators to curb their output.

All EU countries must submit proposals to Brussels by March on how they will meet Kyoto targets and approved plans will come into effect in 2005.

The 16.3 percent cut in the UK's emissions is for the first three-year phase of the EU scheme running from 2005 to 2007.

The curbs on emissions in the second phase of the scheme, from 2008 to 2012, will be tightened to achieve the UK's 20 percent target by 2010.

"The allocation of emission allowances has been set at a challenging but achievable level which will encourage industry to invest in emission abatement and take advantage of the opportunities that trading has to offer," Margaret Beckett, Secretary of State for the Department for Environment, Food and Rural Affairs, said in a statement.

19. Shell, ChevronTexaco To Benefit From UK Emissions Proposal

Oil majors Shell and ChevronTexaco are set to benefit from the British government's proposals to slash greenhouse gases, as their UK refineries have been given generous emissions allowances. The UK's Petroleum Industry Association Limited (PIAL) said most UK refineries had been given unrealistically large emissions cuts to make, but Shell’s Stanlow refinery and ChevronTexaco’s Pembroke plant had been allowed to increase their emissions.

Britain said on Monday it would cut its carbon dioxide (CO2) emissions in excess of its obligations under the United Nations Kyoto Protocol on climate change, prompting protests from industrial consumers which fear this would lead to higher electricity costs. Greenhouse gases are blamed for contributing to global warming.

Shell's 262,000 barrels per day (bpd) Stanlow plant in central England and ChevronTexaco's 210,000 bpd Pembroke plant in Wales are two out of 11 UK refineries and around 1,500 installations for which the government has set CO2 emissions limits. No explanation has been provided for why the two plants have been given more emission allowances than others. The government says it will not comment on individual cases.

Under an EU-wide trading scheme from 2005, companies that do not meet their targets will be allowed to buy carbon allowances from those which emit less than they are allowed.

PIAL said it was looking for a meeting with the Department of Environment, Farming and Rural Affairs (DEFRA) to discuss inconsistencies in how allowances had been calculated.

20. Air-Polluting EU States Face Court Action

Eight EU states are being taken to court for failing to take measures to fight air pollution, the European Commission has announced. Belgium, Italy, Greece, Portugal, the Netherlands, Austria, Spain and Germany all missed a 2002 deadline to implement a host of EU laws on air quality to limit smog and breathing problems. "The European Commission is taking wide-ranging legal action to ensure that member states comply with EU legislation aimed at improving air quality in the European Union," the EU executive said in a statement.

The Commission also sent formal warnings to seven other states to implement anti-pollution laws or risk court action.

The Commission statement showed that Italy was the worst offender, having failed to implement five different EU air pollution laws, including legislation limiting emissions from waste incineration plants and large power plants.

"Delays (in implementing the legislation) put citizens at greater risk of suffering health problems associated with poor air quality," EU Environment Commissioner Margot Wallström said in a statement.

If the court finds against the EU states, it can impose daily fines until the legislation is properly adopted.

21. Russia Says Pressure Over Kyoto Delay 'Unfair'

Russia claims it is not alone in delaying approval of the Kyoto Protocol and any suggestion it is holding up the environmental treaty aimed at cutting greenhouse gases is unfair. Officials say they are still studying the potential impact of the treaty on Russia's economy. Moscow, which can effectively veto Kyoto, has in recent months backed away from promises to ratify it.

"I believe it would be unfair to say that Russia holds the key to the success of the Kyoto protocol," Foreign Minister Igor Ivanov told reporters after talks with French counterpart Dominique de Villepin. "There are a considerable number of countries which have not ratified the protocol for one reason or another."

Under the complex weighting system written into the treaty, which aims to cut emissions of the gases that cause global warming, developed nations responsible for 55 percent of air pollution must ratify it for it to come into force.

Since top polluter the United States

pulled out, saying the treaty would harm its economy, Russia's 17 percent share of emissions has left it with the deciding vote. Australia has also refused to approve the pact.

The European Union is a firm backer and has put heavy pressure on Russia to ratify it - and Ivanov said European opinion would influence the choice it eventually made. "Any decision on this will be based primarily on our own national interests. But we will also take account of the opinion of our partners, especially those from the European Union."

Deputy Prime Minister Viktor Khristenko, in Madrid for talks with the Spanish economy minister, told reporters Russia had retreated from its promises because its economy had changed since the government signed the treaty. "The internal economic situation has changed and we needed more time to evaluate more precisely the consequences and possibilities of Russia complying with its obligations under the Kyoto protocol," he said.

NORTH AMERICA

22. Mexican Environment Ministry to Overhaul Emission Standards for Vehicles

Mexico's Environment Ministry (SEMARNAT) is working on new legislation to improve air quality, with government officials expecting one Official Mexican Standard (NOM) to come into effect in the first six months of the year and two other draft NOMs to be published in the same period.

At least five standards governing emissions will be revised this year, Sergio Sánchez, director of SEMARNAT's General Directorate for Air Quality Management and Pollutants Release and Transfer Registry, has announced. The directorate is the SEMARNAT department responsible for designing the revisions and for technical support in new air quality legislation.

The government specifically aims to reduce emissions of sulfur dioxide (SO_2), which is produced mainly by motor vehicles using diesel fuel and by industry, and of nitrogen oxides (NOx, that is, NO_2 and NO), which are produced principally by industry.

Revised standards also will target ozone formed as a result of vehicle emissions as well as hydrocarbons (HCs) and particulate matter (PM-10) produced by natural sources (such as wind kicking up dust from unpaved streets) and the combustion of diesel and gasoline.

In 2003, the directorate revised two air quality standards applying to incineration and cement plants. Most of the standards to be revised by the directorate this year will govern vehicle emissions.

"This work is important because vehicles are the main source of atmospheric pollution in this country," Sánchez said.

In Mexico, vehicles account for 99 percent of carbon monoxide (CO) pollution, 75 percent of NOx emissions, 54 percent of hydrocarbon releases, and about 60 percent of airborne particulate matter, he said.

The first draft NOM due to be published, and according to Sánchez the most important, is NOM-042 establishing limits for pollutant emissions from new vehicles. "This will apply to vehicles being made in Mexico and establishes limits similar to the Tier 1 emissions standard in the United States and includes durability standards," he said.

Mexico's new vehicle emission standards will aim to reduce emissions of nonmethane hydrocarbons, carbon monoxide, NOx, and evaporative hydrocarbons, setting emission limits at 0.156 gram per kilometer (g/km) for nonmethane hydrocarbons, 2.11 g/km for carbon monoxide, 0.25 g/km for NOx, and 2.0 g/km for evaporative hydrocarbons. These standards will apply to vehicles made from 2004 onward that run on gasoline, natural gas, or liquefied petroleum gas (propane and butane).

Durability standards apply to emissions released by a vehicle after a period of time rather than to those released by new cars rolling right off the production line.

"Until now, the priority has been improving inspection and maintenance with the emissions testing program," Sánchez said. "With this NOM, we are foreseeing the pollution of the future, bearing in mind that 50 percent of cars on the roads in 10 years' time will be those that are being sold now. We want to stop new vehicles [from] becoming polluters."

For vehicles made from 2006 onwards, the Mexican NOM is going to introduce standards comparable to the tougher U.S. Tier 2 standards, to be imposed gradually, Sánchez said.

Sánchez said that, under the revised NOM, those importing cars into Mexico will have to present a certified document to the Federal Bureau for Environmental Protection (PROFEPA) from the environmental authority of the country of origin.

The working group to revise NOM-042 included the main automakers producing vehicles in Mexico and all members of the Mexican Association of Automotive Industries (such as Nissan Motor Co., General Motors Corp., and Volkswagen AG), the government of Mexico City, the government of the adjacent state of Mexico, as well as PROFEPA, which will monitor and enforce compliance with the NOM.

Sánchez said he expects the standard to be published in the *Diario Oficial de la Federación*, Mexico's official journal, as a draft in the next few weeks, after which a period of 60 days is allowed for comments. He said he expects the standard to be accepted and to take effect in the next six months.

In parallel, the Directorate for Air Quality Management is working on revising NOM-086, which regulates "specifications for quality of combustibles". The main objective of the current revision of this NOM, which is in final stages of discussion, is the reduction of the amount of sulfur in fuel, as well as of olefins.

"This is basically a NOM for PEMEX," Sánchez said, referring to state-owned Petróleos de México, the world's seventh-largest petroleum company and the Mexican government's principal revenue earner. Participating in the preliminary discussions for this standard are PEMEX, the Federal Electricity Commission, and major industry trade organizations, such as the National Chamber of Manufacturing Industries and the Confederation of Industrial Chambers. Sánchez said he expects the revised standard to be published as a draft in the next six months.

The revision of NOM-044 establishing emissions limits for new heavy vehicles, such as buses and trucks, is still at the technical discussion stage, Sánchez said. The revision of NOM-044 is likely to be based on both U.S. and European Union standards, but they are not likely to be introduced for some years.

Finally, two standards applying to vehicles in circulation that use diesel fuel, NOM-077 (which limits diesel emissions) and NOM-045 (which establishes criteria for measuring diesel emissions) are also due to be revised this year, and they will probably be merged into one standard.

23. EPA Sets New Pollution Standards For Two-Wheelers

The Environmental Protection Agency set the first new emission standards for highway motorcycles in 25 years, and the first standards for small scooters and mopeds. EPA said that it would reduce pollution from motorcycles, which produce more harmful exhaust per mile than cars or large SUVs, by about 54,000 tons of hydrocarbons and nitrogen oxides per year. The agency said the regulations also would save about 12 million gallons a year of gas evaporating from vehicles' fuel hoses and fuel tanks.

Starting in 2006, manufacturers of highway motorcycles, small scooters and mopeds will be required to reduce emissions of those two pollutants by 60 percent by using improved technologies such as secondary air injection, electronic fuel injection systems and catalytic converters. Starting 2008, manufacturers also will be required to better control fuel loss through fuel hoses and tanks. The table below summarizes the final EPA exhaust emission standards and implementation dates for highway motorcycles based on engine displacement.

Highway Motorcycle Exhaust Emission Standards

Class	Engine Size (cc)	Implementation Date	HC (g/km)	HC+NOx (g/km)	CO (g/km)
Class I	Less than 170	2006	1.0	-	12.0
Class II	170-279	2006	1.0	-	12.0
Class III	280 and above	2006	-	1.4	12.0
Class III	280 and above	2010	-	0.8	12.0

The new emission controls are estimated to add about $75 to the $10,000 average cost of a motorcycle by 2010.

24. ARB Board Given Approval to Finalize Regulatory Items

The California Department of Finance has granted permission for the ARB Board to vote on regulatory items introduced during the November and December 2003 public hearings. Governor Schwarzenegger's Executive Order freezing all proposed state regulations had prevented the Board from taking action. With the Department of Finance's approval, the Board now intends to consider and vote on the four items that have been carried over from late last year at the February 26-27, 2004 public hearing in Sacramento. These four items are: 1) the air toxic control measure covering stationary engines, 2) the air toxic control measure covering transportation refrigeration

units (TRUs), 3) the mandatory engine re-calibration or “reflash” measure, and 4) proposed modifications to ARB’s emission control verification program, including proposed changes to the warranty statement required of verified technologies. In addition, the modifications to the ZEV program previously decided by the Board have been allowed to go into effect.

25. Gore Blasts Bush Space Plan, Says Earth Neglected

Former U.S. Vice President Al Gore scoffed at President Bush's plan to send astronauts to the moon and Mars and said Bush was a "moral coward" for ignoring global environmental threats. Speaking at an event sponsored by political advocacy groups MoveOn.org and Environment2004, Gore said Bush's record on the environment routinely puts the wishes of the coal, oil, utility and mining industries ahead of public interests.

"Instead of spending enormous sums of money on an unimaginative and retread effort to make a tiny portion of the moon habitable for a handful of people, we should focus instead on a massive effort to ensure that the Earth is habitable for future generations," Gore said to a cheering Manhattan crowd.

The speech is one of a series Gore, who served two terms as vice president under President Bill Clinton, has made criticizing Bush's handling of the war in Iraq, the economy, and other issues. Gore lost to Bush in the 2000 election after winning the popular vote and has ruled out a rematch in 2004.

On Wednesday, Bush announced plans to send humans back to the moon as early as 2015 and eventually to Mars - an initiative critics derided as motivated by election-year politics that could cost hundreds of billions of dollars. His dad, former President George Bush, proposed in 1989 to send humans back to the moon and on to Mars, but that idea went nowhere.

Gore accused Bush of reneging on environmental promises made while campaigning for the White House, saying Bush's "seemingly heartfelt declaration" that he was concerned about global warming and the environment was just lip service.

"While President Bush likes to project an image of strength and courage, the truth is that in the presence of his large financial contributors he is a moral coward - so weak that he seldom, if ever, says 'No' to anything that they want to do," Gore said.

In particular, Gore took aim at Bush's "Clear Skies" bill, which limits emissions of sulfur dioxide, nitrogen oxide and mercury but fails to regulate emissions of carbon dioxide, which is believed to contribute to global warming. He also criticized Bush's so-called "Healthy Forest" initiative, which the White House said would reduce the risk of forest wildfires but which environmental groups said promoted logging at the expense of environmental protection.

According to Gore, such policies underscore Bush's goal of satisfying the interests of large industrial corporations in return for hefty campaign contributions.

"It seems at times as if the Bush-Cheney Administration is wholly owned by the coal, oil, utility and mining companies," he said.

While environmental issues dominated the speech, Gore still criticized Bush's handling of foreign policy, saying he has "caused America to be seen by the other nations of the world as showing

disdain for the international community."

26. Court Deals Bush Setback in Air Conditioner Rules

A federal appeals court has overturned a Bush administration decision to weaken energy-efficiency standards for new air conditioners, a move which could save American consumers $20 billion and avoid the need for up to 200 new electricity plants by 2030.

In 2001, 10 states including New York, California, New Jersey and Massachusetts sued the U.S. Department of Energy to block it from scaling back an increase in minimum air conditioner energy-efficiency standards. The Bush administration wanted to require air conditioners and heat pumps manufactured after January 2006 to become 20 percent more efficient, not the stricter 30 percent improvement required under a previous Clinton-era rule.

Air conditioners can account for about one-third of all U.S. electricity use during hot summer days when demand is the highest.

The U.S. Court of Appeals for the Second Circuit ruled that the Energy Department lacks the authority to revoke such rules once they are published as final rules. It cited a "no-rollback" provision contained in an appliance standard law which Congress passed in 1987.

New York Attorney General Eliot Spitzer said the ruling means that the Bush administration cannot unilaterally change laws passed by Congress. In dark of night this administration cannot rewrite the laws -- Congress writes the laws," Spitzer said in an interview.

The stricter standards could help U.S. utilities avoid the need to build 200 new power plants and save consumers a cumulative $20 billion in electricity bills by 2030, the American Council for an Energy Efficient Economy said. The group said it based its projection on the assumption that small, 100-megawatt plants used to meet peak demand would not be needed.

The Bush administration withdrew the final rule in May 2002 and weakened it under pressure from some appliance makers. Activist groups and Democrats have criticized a series of White House environmental policy changes as catering to industry demands for less costly regulations.

The Energy Department is disappointed by the court's decision and is reviewing it, a spokesman said.

27. Volkswagen, ADM Team Up To Develop Biodiesel Fuel

Automaker Volkswagen AG and grain processor Archer Daniels Midland have announced they have formed a research venture to develop and use biodiesel fuels for the auto industry. Biodiesel refers to fuel mixtures made by combining diesel petroleum with soybean oil or other vegetable oils and fats. It can power conventional diesel engines, and substantially reduces emissions of carbon monoxide and particulate matter, the companies said in a statement.

The pact is the first between one of the world's leading automakers and a global agribusiness company to develop next-generation clean renewable fuels, they said.

"This agreement represents Volkswagen's commitment to introducing clean burning and renewable fuels into the automotive

industry," said Bernd Pischetsrieder, chairman of the board of management of Volkswagen AG.

ADM Chairman and Chief Executive G. Allen Andreas said: "Advances in biodiesel will benefit the automotive industry, the driving public, farmers and the environment as a whole."

Volkswagen is one of the world's largest producers of passenger cars and Europe's largest automaker. ADM is the largest U.S. producer of corn-based ethanol and the largest U.S. processor of soybeans, the main source of biodiesel.

Biodiesel has become the fastest growing alternative fuel in the United States, largely without incentives, but it is still more costly than petroleum diesel, according to the National Biodiesel Board.

The United States currently consumes about 20 million gallons of biodiesel each year, up from 500,000 gallons in 1999. More than 350 fleets, ranging from school buses to military installations to National Parks, now use biodiesel.

A report prepared by the U.S. Department of Agriculture concluded that an additional 100 million gallons of biodiesel demand would increase revenue for U.S. soybean farmers by more than $112 million, NBB said.

A tax incentive of one penny per percentage point of blended biodiesel was included in the latest U.S. energy bill that stalled in the U.S. Congress last November.

28. Honda To Sell Accord Hybrids In US This Year

Honda Motor Co., Japan's second-biggest auto maker, said yesterday it would launch a gasoline-electric hybrid version of its Accord sedan in the key U.S. market this autumn. The car, which will compete with Toyota Motor Corp.'s hot-selling new Prius hybrid sedan, will be more powerful than the 240-horsepower Accord V6 car but with the fuel economy of a four-cylinder, compact-class Civic, it said.

Honda became the first auto maker to bring gas-electric hybrid cars to the United States in December 1999 with the Insight two-seater, but sales have been sluggish because of perceptions of impracticality.

Other auto makers are planning to follow Toyota and Honda's lead in offering hybrid vehicles, with Ford Motor Co. due to launch the Escape hybrid sport utility and DaimlerChrysler AG coming out with the Dodge Ram hybrid this year.

Speaking at the North American auto show in Detroit, Honda President Takeo Fukui said the auto maker would also launch an improved version of the hydrogen-fuelled FCX that uses an internally developed fuel cell stack in the United States and Japan next year.

29. New Houston Mayor Pledges Pollution Cleanup

Former Texas Democratic Party chairman Bill White has been sworn in as mayor of Houston and has pledged to make the polluted city greener and cleaner. White, who held his inauguration ceremony in a park to drive home his environmental agenda, put polluters on notice that their actions would not be tolerated in a city that has vied with Los Angeles for the nation's worst air pollution.

"Let me talk plainly then - no one has

the right to endanger public health by altering the chemistry of the air we breathe," White told several thousand people gathered at an outdoor theater in Hermann Park.

"Let's take advantage of the fact that we have a 12-month growing season to build a green city, to plant more trees and to build parks all along the fabulous bayou system that we have," said White. “And let's use our excellence in science and technology to address those problems which people have talked about, but have gotten worse over time - the problems of air quality and flooding."

Houston is the nation's fourth largest city and the center of the U.S. oil industry, which has constructed a sprawling complex of pollution-spewing refineries and petrochemicals. The city has as many cars as people because of a poor mass transit system that was based solely on buses until recently when the first leg of a citywide light rail system was opened. White rode one of the sleek new trains to his inauguration.

White, 49, beat a Republican Hispanic candidate backed by President Bush in a December runoff election to replace outgoing Mayor Lee Brown. Brown was the city's first black mayor but could not run again due to term limits after six years in office.

Even though Houston city elections are officially non-partisan, White's victory provided a rare boost for Texas Democrats who in the last decade have seen Republicans win every statewide office.

White is a Harvard educated lawyer and businessman who headed the Texas Democratic Party from 1995 to 1998 and also served as a deputy energy secretary under President Bill Clinton.

30. NHTSA Proposes Changes to CAFE Regulations

The National Highway Traffic Safety Administration (NHTSA) issued an advanced notice of proposed rulemaking on December 22, 2003 covering proposed changes to the federal automobile fuel economy standards program, or CAFE program. These proposed changes would revise the definitions and policies for applying fuel economy standards to light-duty vehicles but not change specific fuel economy requirements. Included in the proposal are the following topics:

- Expanding fuel economy standards for vehicles up to 10,000 lbs. gross vehicle weight from the current 8500 lbs. gross vehicle weight limit
- Redefining the light-duty truck category to more accurately reflect today’s market differences between cars and trucks
- Shifting from the current system that sets separate fuel economy standards for passenger cars and light-duty trucks to a system that has more than two vehicle classes that could include classifications based on weight, size, or some combination of attributes

NHTSA is soliciting public comments on proposed modifications to the CAFE program and may finalize new CAFE policies by the end of 2004. Any new CAFE regulations would not take effect prior to the 2008 vehicle model year.

31. GM, Auto Suppliers Form Partnership For The Environment

General Motors Corporation, automobile suppliers, and the U.S. Environmental Protection Agency have announced a

new partnership to increase the competitiveness of U.S. companies while reducing environmental impacts. "The Suppliers Partnership for the Environment (SP) is a new forum for sharing environmental best practices throughout the automotive industry supply chain, especially for the benefit of the smaller, lower-tier companies in the industry," said Rebecca Spearot, director of environmental management for Lear Corporation and SP's first chair of the board. She continued, "SP will enable automotive equipment manufacturers to actively engage all levels of their supply chains in development of common-sense approaches to reducing environmental impacts. Through the partnership, suppliers will be able to continuously improve products and processes, increase energy efficiency, eliminate wastes, identify cost-saving opportunities, and optimize resources and technologies."

"GM is committed to environmental excellence and to cooperating with and supporting our supply chain," said Pat Beattie, director of environmental services for GM. "While working with EPA on a pilot project initiated with our Saturn division, we identified real opportunities to improve both the environment and the competitiveness of companies in our supply chain," she said. "SP grew out of that experience. This organization is committed to providing quantifiable value to the automobile supply chain, and we are pleased to be a leader in this effort."

SP will provide value to its members by providing a forum for companies to work together to share "best practices" through task forces and work groups to address specific issues; providing facility-specific technical assistance on energy and chemical use optimization and other issues; identifying and addressing externally driven environmental impacts; and retaining the costs savings realized through SP activities.

"EPA welcomes the opportunity to work with the Suppliers Partnership for the Environment," said Stephen L. Johnson, EPA assistant administrator for prevention, pesticides, and toxic substances (now acting deputy administrator for EPA). "This is a unique opportunity for government and industry to work together toward the common goals of improved environmental performance and progress in the automobile supply chain. One of the key things EPA brings to the suppliers partnership is connection to other programs within EPA and other federal agencies, which brings additional resources to bear on pollution prevention in the industry."

Johnson continued, "Through the suppliers partnership, EPA has engaged the Department of Commerce to provide technical assistance to suppliers. The department's National Institute of Standards and Technology — Manufacturing Extension Partnership will conduct facility-specific workshops to help suppliers identify ways to reduce waste, conserve energy, and cut costs. In addition, EPA is also coordinating with Department of Energy programs to help companies increase their energy efficiency."

Rebecca Spearot of Lear Corporation said, "As a member-driven organization, SP is addressing several different issues important to maintaining a productive and green supply chain, including energy and chemical use optimization, training, education, technical assistance, sustainability, and transactional processes. SP is open to all automotive companies, and the members are to be commended for the proactive environmental supply chain management efforts that have led to the

creation of SP," she said.

The partnership's members include: Ashland Inc.; B.A.E. Industries; Delphi Corporation; Detroit Chassis LLC; Federal-Mogul Corporation; Freudenberg-NOK; General Motors Corporation; Haas TCM; Johnson Controls, Inc.; Lear Corporation; Motorola, Inc.; NSK Petoskey Plastics Inc.; and Visteon Corporation.

32. Supreme Court Rules EPA Can Overrule State In Clean Air Case

The Supreme Court has ruled that the federal Environmental Protection Agency can override state officials and order some antipollution measures that may be more costly. The 5-4 decision, a victory for environmentalists, found the EPA did not go too far when it overruled a decision by Alaska regulators, who wanted to let the operators of a zinc and lead mine use cheaper antipollution technology for power generation.

The four justices who dissented said the ruling undercut the states' power to control their environmental policies.

The Alaska case was the first of eight environmental cases on the court's docket this term, an unusually high number. The fight was over whether the Red Dog Mine must use equipment that would reduce pollution from a new generator by 90 percent. The state wanted to allow the mine operator, a major employer in a particularly rural area of Alaska, to use equipment that would only reduce pollution by 30 percent.

The Clean Air Act allows state officials to make some decisions involving facilities within their borders but still gives the EPA wide authority to enforce the antipollution law passed by Congress in 1970.

"We fail to see why Congress, having expressly endorsed an expansive surveillance role for EPA," elsewhere in the law, "would then implicitly preclude the agency from verifying substantive compliance," with the portion of the law at issue in this case, Justice Ruth Bader Ginsburg wrote for the majority. Ginsburg's usual allies on the court's ideological left joined her in the ruling: Justices John Paul Stevens, David H. Souter, and Stephen Breyer. The crucial fifth vote came from Justice Sandra Day O'Connor, who usually votes with the court conservatives in states' rights cases.

The four dissenters argued that the decision undercuts states' power to control their environmental policies.

"This is a great step backward in Congress' design to grant states a significant stake in developing and enforcing national environmental objectives," wrote Justice Anthony M. Kennedy, joined by Chief Justice William H. Rehnquist and Justices Antonin Scalia and Clarence Thomas.

"After today's decision, however, a state agency can no longer represent itself as the real governing body. No matter how much time was spent in consultation and negotiations, a single federal administrator can in the end set all aside by a unilateral order," Kennedy wrote.

The case is State of Alaska v. U.S. Environmental Protection Agency, 02-658.

33. Clean Energy Investments Would Create 3.3 Million Jobs, Says Study

An alliance of labor, environmental, civil rights, business, and political leaders in the United States have laid out a vision

for a "New Apollo Project" to create 3.3 million new jobs and achieve energy independence in 10 years. Named after President Kennedy's moon program, which inspired a major national commitment to the aerospace industry, the Apollo Alliance aims to unify the country behind a 10-year program of strategic investment for clean energy technology and new infrastructure.

The alliance also announced that it has received support from 17 of America's largest labor unions — including the United Auto Workers, the Steelworkers, and Machinists — as well as a broad cross section of the environmental movement, including the Sierra Club, the Natural Resources Defense Council (NRDC), the Union of Concerned Scientists, and Greenpeace.

Dr. Ray Perryman, a corporate economist from Texas who prepared a detailed economic analysis of the proposal for a New Apollo Project said, "If economists agree on anything it's that inventing new technologies and creating whole new industries is what America does best. We are a creative economy, not a commodity economy. The New Apollo Project would keep us on the cutting edge of manufacturing emerging technologies and secure our long-term prosperity."

Perryman concluded that the proposed tax credits and investments would create 3.3 million new, high-wage jobs for manufacturing, construction, transportation, high-tech, and public sector workers, while reducing dependence on imported oil and cleaning the air. Perryman's analysis shows that a New Apollo Project would also position the United States to take the lead in fast-growing markets, dramatically reduce the trade deficit, and more than pay for itself in energy savings and returns to the U.S. Treasury. Perryman's study was based on an input-output analysis of impacts on key industry sectors, using a highly regarded economic model and extensive survey data.

Sen. Maria Cantwell (D-Wash.) said, "At the time of Kennedy's moon shot, we were in space race with the Soviet Union. Now we are in an economic race with the Europeans and Japanese. Bush is focused on the past; the New Apollo Project for energy independence is focused on the future. America led the electronic and communications revolutions. Now we must lead the clean energy revolution if we are to maintain our global economic leadership."

Congressman Jessie Jackson Jr. (D-Ill.) issued a statement in support of the release saying, "One of the keys to America's energy security — and therefore our national security — lies in rebuilding our cities. We need strategic investments to retrofit old buildings, expand transportation alternatives, restore our infrastructure, and create solar, wind, and hydrogen technology. Apollo will rebuild our country in a way that benefits all Americans and reestablishes our global economic competitiveness."

California State Treasurer Phil Angelides said, "As California's chief investment officer and a fiduciary of the nation's first and third largest pension funds, I am well aware that the way in which we invest capital can shape not only the contours of our economy, but also the future of our communities, our society, and our environment for decades to come. I applaud the efforts of the Apollo Alliance to develop programs that illustrate how strategic public investments can stimulate our economy while at the same time improve the quality of life in communities across our nation."

Rep. Jay Inslee (D-Wash.) said, "The

New Apollo Energy Project is an opportunity for a bold new energy policy that can free us from our over-dependence on Middle East oil, expand the economy, and address environmental challenges. We should call for a total national commitment to harness the genius of America's can-do attitude that would design, invent, and deploy the new clean energy technologies that benefit this new century. No single national endeavor has such capacity to expand our economy by tapping our innate and unique technological genius for innovation, and creating millions of new jobs."

According to Carl Pope, the executive director of the Sierra Club, one of the country's oldest and largest environmental groups, "A New Apollo Project will help accelerate the transition away from our dependence on imported oil and other polluting fossil fuels and toward clean energy like solar and wind. Apollo stands in marked contrast to the Bush Administration's damaging energy agenda, which hurts job creation and the environment. An Apollo Project can simultaneously address the threats of manufacturing job loss, global warming, and our diminishing national energy security."

John Podesta, president of the Center for American Progress, said, "In stark contrast to the secret Cheney energy plan hatched by big oil, the Apollo Project harnesses America's ingenuity in support of an energy program that enhances our security, our health, and our livelihoods."

Bracken Hendricks, executive director of the Apollo Alliance underscored the importance of Apollo in the upcoming political cycle. "We are seeing for the first time a competition among all the major presidential candidates to produce the best plan for investing in clean energy infrastructure and good jobs. The public is demanding a forward-looking plan to rebuild our economy and a positive solution to our energy insecurity. A bold approach like Apollo is the kind of leadership we need from our next president."

34. Ozone Standards Pose Health Risk, Scientists Report

The air Americans breathe contains more ozone from pollution than the Environmental Protection Agency estimates according to a new Harvard scientists report. To calculate air quality standards for ozone, EPA distinguishes between the background or "natural" levels of ozone in the air and that caused by pollution in North America. "Our results actually indicate that EPA is overestimating the background level, and as a result is underestimating the health risk associated with ozone pollution," atmospheric chemist Arlene Fiore says. This assumption skews the air quality standards that EPA sets, making them weaker than they could be, Fiore and co-authors report in the Journal of Geophysical Research - Atmospheres, published by the American Geophysical Union.

Using a three-dimensional model of atmospheric chemistry, the scientists simulated background ozone for the United States and found great variability, depending upon the season, elevation, and geographic area. "It is highest at high-altitude western U.S. sites in spring," Fiore says. "Results from our modeling study also indicate that frequent springtime high-ozone events, which were previously attributed by some researchers to a natural, stratospheric source, are driven largely by pollution."

The big question now for EPA and the scientific community is, according to the

researchers, should risk levels of ozone be calculated on a type of sliding scale, depending upon the season and place? "Our answer to [this] question is a resounding yes," Fiore says. "Our modeling study shows that background ozone concentrations in surface air are highly variable, and this variability in background ozone--and its associated risk level--should be taken into account."

35. Ultra-Low-Sulfur Diesel Regulations Worry Truck Stop, Leasing Groups

Representatives of truck stops and truck leasing companies recently raised concerns about the upcoming federal requirement for ultra-low-sulfur diesel fuel, saying the planned 4-year phase-in period could add costs and fuel-compatibility problems. Both Natso Inc., which represents truck stop operators, and the Truck Rental and Leasing Association cited potential cost, fuel compatibility and supply concerns as the 2006 implementation date draws closer.

Trala is concerned about potential misfueling, which could harm truck engines, said Tom James, the group's vice president for government relations.

The phase-in period, during which both ultra-low-sulfur diesel and fuel with more sulfur would be available, could lead to putting the wrong type in trucks, he said.

36. States Consider Adopting California's Heavy-Duty Emissions Program

A recent letter from the State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials (STAPPA/ALAPCO) to the American Trucking Associations (ATA) indicates that several states would begin looking at adopting California's heavy-duty on-road diesel emission standards as a backstop to EPA's 2007-2010 on-road heavy-duty emissions program. The California on-road heavy-duty program mirrors the EPA 2007-2010 program. The letter sent by STAPPA/ALAPCO was prompted by concerns that EPA might delay or weaken their heavy-duty on-road emissions program based on pressures from ATA and its members. ATA officials have recently stated that "more time" is needed to implement the EPA program. EPA has stated that it currently has no plans to delay implementation of the program.

The state and local air officials have now decided to develop a model regulation that would implement California diesel regulations comparable to the federal rules. "When the federal government is unable or unwilling to address concern of state and local pollution control agencies, we will not sit idly by," says the State & Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials (STAPPA/ALAPCO). The action comes as the General Accounting Office (GAO) prepares to release a report which is expected to criticize the diesel regulations, and echoes a well-established pattern of states seeking to address perceived gaps in federal rules.

In a Jan. 30 letter, STAPPA/ALAPCO Executive Director Bill Becker tells the American Trucking Associations (ATA) that continued trucking industry criticisms of the rules "have caused states to seek certainty through a backstop." The letter says states would prefer to implement the federal rule, but STAPPA/ALAPCO will work over the coming year to pursue their statutory authority to opt into California's highway diesel emission standards for 2007. The Clean Air Act allows states to follow California's lead in implementing stricter

mobile source regulations than federal regulations.

Becker calls emissions reductions from diesel vehicles “critically important to state and local air pollution control agencies’ efforts to meet and sustain” national air quality standards. "If the provisions of the 2007 (federal) rule are weakened or delayed, clean air efforts across the country will be severely undermined and public health will suffer," the pollution control groups' presidents, James A. Joy III and Cory R. Chadwick, wrote.

The Environmental Protection Agency estimated its new rule would prevent every year some 8,300 premature deaths, 5,500 cases of chronic bronchitis and 17,600 cases of acute bronchitis in children.

STAPPA/ALAPCO had already indicated in 2003 that states were weighing a state diesel engine regulatory strategy, in response to remarks by ATA President Bill Graves at an industry conference indicating the federal 2007 rules are too burdensome. The group has already developed model regulations on multiple air pollution problems, including rules on transportation conformity, a rule regulating emissions from paints, a regulation ensuring compliance with diesel truck engine “not to exceed” emissions limits between 2005-2006, and most recently a model regulation outlining alternatives to EPA’s controversial reforms to the new source review program.

The new state letter comes as the GAO report on diesel regulations two House Republicans -- Reps. Mac Collins (R-GA) and John Shadegg (R-AZ) -- requested is nearing completion. The original plan for the study to evaluate a consent decree between EPA and the diesel engine industry has been broadened to assess the 2007 diesel requirements.

Spokesman John Millett said EPA Administrator Mike Leavitt was determined that the rules would be invoked. "There's no way of pulling back from the heavy duty highway diesel standards," Millett said. "The administrator is going to have the strongest diesel standards in the world -- cleaner fuels and cleaner engines."

Glen Kedzie, an attorney for the trucking trade group, said the industry wants assurances that new truck engines will meet the new standards. "Our industry is all in favor of clean air. Our industry is all in favor of using proven technologies. We just don't really know what to expect with the 2007 engines," he said. Kedzie said new trucks will cost an average $5,000 to $10,000 more, and the fuel economy may be up to 20 percent less efficient. "That's a major, major hurdle for a small business to overcome when fuel is a major expense for a company," he said.

In May 2002, a three-judge panel of the U.S. Court of Appeals for the District of Columbia Circuit rejected attempts by truck engine builders and the oil industry to overturn the new air requirements. The rules were issued in the final weeks of the Clinton administration, upheld by the Bush administration and reaffirmed by an EPA scientific advisory panel in October 2002. In court, the engine manufacturers argued the technology was unavailable to meet the more stringent tailpipe emission requirements by 2007, when they would begin to be phased in.

Federal law permits states either to follow the EPA tailpipe standards or to adopt California motor vehicle standards because they are at least as tough. California's requirements are almost identical to the new ones from the EPA,

calling for more than 90 percent reductions in smog-forming nitrogen oxides and particulate soot from diesel trucks and buses.

37. EPA Requests $60 Million To Reduce Emissions From School Buses

The Environmental Protection Agency will request an additional $60 million in its fiscal year 2005 budget to reduce emissions from the nation's school buses, EPA Administrator Mike Leavitt announced Jan. 30. "This funding demonstrates the president's commitment to protecting children's health and cleaning America's air," Leavitt said. "It's a big increase because, as we see here, this program works. As a result of this new funding, EPA can expand this program from just 17 districts in 2004 to nearly 220 school districts all across the country."

The Bush administration budget request, which is scheduled to be released Feb. 2, will seek a total of $65 million for the Clean School Bus USA program, a 13-fold increase from fiscal year 2004, according to EPA.

Leavitt made the announcement at the McKnight Elementary School in McCandless Township, Pa., which is part of the North Allegheny School District near Pittsburgh. That district received a $125,000 EPA grant in October 2003 to retrofit its 100-bus fleet with emissions-controlling catalysts, according to EPA. Such catalysts may reduce emissions of particulate matter by at least 20 percent, carbon monoxide by 40 percent and hydrocarbons by 50 percent, EPA continued.

Under the program, EPA grants could be used to replace pre-1991 school buses with new clean school buses offering state-of-the-art emission control and safety features, and to retrofit post-1991 buses with similar pollution control devices.

This is a particularly important program because school buses have very long useful lives and may remain in service for 20-30 years, EPA noted. EPA launched the Clean School Bus USA program in April 2003, and hopes to have all school buses upgraded or retrofitted with the emissions-controlling devices by 2010

The EPA chapter in the FY 05 Budget Book states “In April 2003, EPA began the Clean School Bus USA pilot program to provide schools and school districts cost-share grants to reduce diesel emissions from school buses. EPA received nearly $60 million in requests for the $5 million available in 2003. In 2005, the Administration proposes to significantly expand the Clean School Bus USA program, increasing funding to $65 million. This initiative will reduce buses' potentially harmful emissions and help protect public health in a cost-effective manner that promotes local solutions to air quality problems.

The Administration also recognized that changes to other vehicle emissions would result in significant improvements in air quality. Accordingly, EPA issued strict new emissions standards for diesel engines in new heavy-duty trucks and buses, and required the use of low-sulfur diesel fuel in those engines by 2007. When fully implemented, these actions will cut harmful pollution from heavy-duty trucks and buses by 95 percent, eliminating 2.6 million tons of smog-causing nitrogen oxide emissions and 110,000 tons of soot and particulate matter each year. EPA also proposed standards for heavy-duty, non-road diesel engines used in construction, mining, agricultural, and industrial equipment. Combined with regulations

that will require low-sulfur diesel fuel, the Administration's approach will prevent up to 9,600 premature deaths and nearly a million lost work days due to illness."

38. EPA Administrator Leavitt Launches Tier 2 Vehicles

The U.S. EPA held a press event in Washington, D.C. on January 26, 2004 to recognize the launch of EPA's Tier 2 light-duty vehicle program. This program, when fully phased in by 2009, will introduce cars, light-duty trucks, minivans, and SUVs that are 77 to 95% cleaner than vehicles certified under pre Tier 2 EPA emission standards. The program also includes the introduction of low-sulfur gasoline with 90% less sulfur compared to previous gasoline formulations. The event included a display of seventeen 2004 model year vehicles that have already been introduced and certified to the new Tier 2 emission standards. Auto industry officials expect that up to 35% of the 2004 model year vehicles will be certified to the Tier 2 tailpipe and evaporative emission standards, a level significantly above the 25% 2004 Tier 2 fleet requirement. EPA expects 90% of the nation's gasoline supply to meet the 30 ppm S average by 2007. Estimated costs to the consumer for these new generation Tier 2 vehicles are between $70 and $250 per vehicle with ultra-low sulfur gasoline costs estimated to be less than 2 cents per gallon.

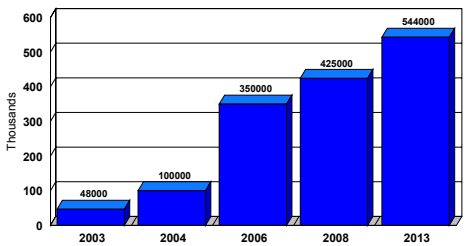
39. New Jersey Adopts California Light-Duty Emission Standards

The New Jersey Senate and Assembly have both approved the implementation of California's Low Emission Vehicle (LEV) program, including California's Zero Emission Vehicle program, starting in 2009. Governor James McGreevey signed this "Clean Car" legislation into law on January 14, 2004. Vehicle manufacturers will receive credits for producing LEV-2 vehicles for sale in New Jersey prior to the 2009 implementation date. Supporters of the California programs state that adopting the California standards will reduce air toxins and smog by up to 20% beyond what would be achieved through the federal Tier 2 light-duty standards by 2020. The bill also establishes a 15-member commission of auto industry representatives and environmentalists to determine if the zero emission vehicle production requirements of California's light-duty vehicle program are feasible in New Jersey. The commission will also recommend incentives for the production of partial zero-emission vehicles (PZEVs) and review future changes that the California Air Resources Board may propose or adopt for the California LEV program. New Jersey joins Maine, Massachusetts, New York, and Vermont as states that have opted in to California's light-duty LEV program.

40. J.D. Power Remains Bullish on U.S. Hybrid Vehicles Market

The recent SAE Hybrid Vehicles Symposium held January 28-29, 2004 in San Diego, CA included a presentation by Walter McManus, Executive Director of J.D. Power & Associates Forecasting and Analytics Group. Mr. McManus stated that sales of hybrid vehicles in the U.S. totaled 48,000 vehicles during 2003. Current J.D. Power sales

Hybrid Electric Vehicle Forecast For The US



Source: J.D. Powers & Associates

forecasts for hybrid vehicles in the U.S. in the future are illustrated above. J.D. Power expects the number of hybrid product offerings to significantly expand in the U.S. market during the next five years covering a broad range of vehicle classes.

Upcoming U.S. hybrid product launches include the 2004 Lexus RX 400h hybrid SUV, the 2005 Toyota Highlander hybrid SUV, the 2005 Honda V6 Accord hybrid, the 2004/05 Ford Escape hybrid SUV, the 2006 GM Saturn VUE hybrid SUV, the 2007 GM Malibu hybrid, and the 2008 GM Tahoe hybrid SUV. These upcoming hybrid launches are likely to be certified as Advanced Technology-Partial Zero Emission Vehicles (AT-PZEVs) like the current Honda Civic hybrid and the new Toyota Prius hybrid. Toyota's U.S. allocation for the new Prius hybrid will expand to almost 4,000 vehicles per month this spring based on strong demand for this newly redesigned vehicle. Toyota has sold nearly 70,000 Prius hybrids in the U.S. through the end of 2003 since its U.S. debut in the summer of 2000.

41. Greenhouse Gas Effects Linked to Possible North Atlantic Cooling

Elevated carbon dioxide levels in the atmosphere are causing changes in the circulation of North Atlantic waters that could lead to localized cooling in parts of northern Europe and North America, a scientist said Jan. 28 at the 2004 Ocean Sciences Meeting of the American Geophysical Union. At the same time, the increased level of carbon dioxide in the atmosphere promises to delay the onset of the next ice age, said Lawrence Mysak, professor at the department of atmospheric and oceanic sciences, McGill University, Montreal.

Global warming is slowly increasing the surface water temperature of the North Atlantic and thereby increasing the water's buoyancy, Mysak said in a news conference at the meeting. The more buoyant water slows down the north-to-south, buoyancy-driven thermohaline circulation of ocean water that transports warm water from the tropics to northern latitudes, he said. With less warm water being transported into the northern latitudes by these currents, some local cooling probably will occur in parts of northern Europe and possibly North America, Mysak said. It is unclear now what land areas may grow cooler as a result of such ocean current changes, but he emphasized that the cooling probably would be localized and not regional.

According to Mysak, global warming has been under way since the beginning of the industrial revolution in the early 1800s, but it has greatly accelerated in the past 30 years to 40 years. Pre-industrial levels of carbon dioxide in the atmosphere measured 280 parts per million compared to 370 ppm today, he said.

At pre-1800 atmospheric carbon dioxide levels, the next ice age would begin in about 50,000 years, Mysak said. As long as current levels of carbon dioxide in the atmosphere are maintained, there will be no ice age.

42. GAO Says U.S. Greenhouse Gas Inventory Lacks Data Quality Procedures

The U.S. submission to the United Nations on its most recent greenhouse gas emission inventories was largely complete but lacked optional information on data quality assurance methods, according to a U.S. General Accounting Office report released Jan. 23. The report comes as the Department of Energy is accepting public comments

until Feb. 17 on its proposed rule to revise the administration's general guidelines on a voluntary reporting scheme to make data more reliable.

While the GAO found that the United Kingdom's 2000 and 2002 reports on greenhouse gas emissions contained nearly all of the required information as well, it noted that neither nation provided information on the procedures used to measure data quality. The nations "were encouraged, but not required, to include" this information in their submissions, GAO said.

On the other hand, GAO found that the most recent reports from Germany (2001) and Japan (2000) "lacked critical elements" required to be submitted. For example, both submissions needed to explain how the emissions estimates were developed, which was essential to understanding the meaning of the data submitted.

Updating their findings, GAO also said their preliminary checks found that all four nations' 2003 reports were largely complete.

The GAO conducted the review of inventories at the request of Reps. W.J. "Billy" Tauzin (R-La.), chairman of the House Committee on Energy and Commerce; Joe Barton (R-Texas), chairman of the House Energy and Commerce Subcommittee on Energy and Air Quality; and James Greenwood (R-Penn.), chairman of the House Energy and Commerce Subcommittee on Oversight and Investigations Committee.

As signatories to the 1992 U.N. Framework Convention on Climate Change, that aims toward stabilization of atmospheric concentrations of carbon dioxide and five other greenhouse gases, parties agreed to periodically report on their emissions. In the response to the representatives, GAO agreed to describe the results of the most recent reviews and assessments of U.N. reports from selected economically developed and developing nations, as well as the parties' plans to improve the reports.

In the Dec. 23, 2003, report, *Selected Nations' Reports on Greenhouse Gas Emissions Varied in Their Adherence to Standards*, GAO summarized reviews of inventories conducted by both the administrative arm of the framework convention, the U.N. Secretariat, and "expert teams" representing selected parties to the framework.

GAO said that because the U.K. and U.S. submissions were largely complete, "the experts' suggestions for improving those submissions were not substantial." Moreover, in their 2003 submissions, all four developed nations reported that they had high confidence in at least 75 percent of their total emissions data, largely because "most emissions are carbon dioxide, which is relatively easy to estimate with a high degree of accuracy."

However, these same nations acknowledged that future assessments of confidence in these data must be quantified to produce more useful information. Effective in 2005, the developed nations are required to assess their confidence in their data using quantitative methods and to report numerical ratings instead of reporting by the categories high, medium, or low, according to the framework convention.

The parties consider quantitative methods to be better because the resulting numerical ratings give a more precise assessment of nations' confidence in their data and make it easier for the nations to set priorities when deciding how to improve the accuracy of the inventories.

To improve the quality of data on greenhouse gas emissions, the parties to the framework convention are refining their requirements for nations' inventories and bolstering their review processes, with the changes to take effect over the next few years.

For example, in addition to the new requirement for performing a quantified assessment of data confidence, industrialized nations such as the United States will be required to structure the documentation that explains the inventories according to a standardized format beginning with their 2004 submissions.

Also, GAO said the parties plan to subject all 39 eligible industrialized nations to an annual expert review, beginning with their 2003 submissions. As of November 2003, 188 parties had ratified the framework convention, of which 40 parties (39 nations and the European Union as a whole) are listed in Annex I of the convention and until this year, only a portion of those Annex I nations underwent an expert review each year, according to GAO.

The U.S. Environmental Protection Agency, which is responsible for preparing the U.S. submission, reviewed a draft of the GAO report and provided only clarifying comments, which were incorporated.

John Stephenson, director of natural resources and environment for GAO, said his office also requested comments from the State Department and the Framework Convention Secretariat, "but none were provided."

43. New Canadian Government Vows to Meet Kyoto Obligations

Canada will meet its commitments under the Kyoto Protocol to reduce greenhouse gas emissions, Prime Minister Paul Martin's government said Feb. 2. "The government of Canada will respect its commitments to the Kyoto accord on climate change in a way that produces long-term and enduring results, while maintaining a strong and growing economy," the administration said in a speech outlining its agenda for the new session of the Canadian Parliament that started Feb. 2. The "speech from the throne" was delivered by Governor-General Adrienne Clarkson, the Queen's representative in Canada.

The government's vow to meet Canadian obligations under the Kyoto Protocol is important because political observers had said the Martin government might not be as committed to implementing the climate change pact as his predecessor, former Prime Minister Jean Chretien.

The throne speech, together with the federal budget due later in February, is expected to form the basis for the Martin government's platform in an election campaign that it is expected to call for the spring of 2004. In that case, legislation to implement the promises could not be passed before the election.

The speech did not provide details of how the government will implement its Kyoto Protocol commitment to reduce greenhouse gases emissions by 6 percent from 1990 levels by 2008-2012. It noted only that the government will develop an "equitable" national implementation plan in partnership with provincial and territorial governments. Chretien had come under fire for similar promises that never led to a detailed implementation plan.

Other environment-related promises included:

- a stronger commitment to reducing air and water pollution, including negotiations with the United States on transboundary issues and with provincial governments on tougher air and water quality standards;
- incorporation of key environmental indicators on clean water, clean air, and emissions reductions, into federal decision making; and
- increased financial support for developing and commercializing environmental technologies.

44. U.S. Report: Benefits From Hydrogen Slow, Minor

A U.S. National Academies report, The Hydrogen Economy: Opportunities, Costs, Barriers, and R&D Needs, released Feb. 4 said the transition to a hydrogen economy would take many decades. The report acknowledged that transition to hydrogen as "a major fuel in the next 50 years could fundamentally transform the U.S. energy system," but said that technical, economic, and infrastructure barriers need to be overcome. "Our study suggests that while hydrogen is a potential long-term energy approach for the nation, the government should keep a balanced portfolio of research and development efforts to enhance U.S. energy efficiency and develop alternative energy sources," committee chair Michael Ramage said in a statement.

In 2003, President Bush launched a $1.2 billion initiative to reduce U.S. dependence on foreign oil by developing hydrogen-powered fuel cells to run cars and trucks as well as homes and businesses. The administration wants to have the hydrogen cars on the market and available to consumers at an affordable price by 2020. However, the NAS panel concluded that Americans should not hold their breath waiting for the cars to arrive in showrooms. "In the best-case scenario, the transition to a hydrogen economy would take many decades, and any reductions in oil imports and carbon dioxide emissions are likely to be minor during the next 25 years," said the academy, an independent group that makes scientific recommendations to Congress.

The emissions-free vehicles would cut pollution and emit water as their only by-product. Automobiles currently emit large quantities of carbon dioxide, a heat-trapping gas that scientists have linked to global warming.

The Bush administration's 2005 budget request asked Congress for $228 million to develop cars that run on hydrogen fuel and the service stations to support them, up 43 percent from the 2004 request.

Environmental groups said the government needs to take quicker action to reduce gasoline use by boosting mileage requirements and curb growing emissions from new gas-guzzling SUVs, pickup trucks and minivans.

45. Bush Budget Cuts Environmental Funding by 7 Pct

The Bush administration has proposed a 2005 budget for the Environmental Protection Agency which is down more than 7 percent from levels Congress enacted in 2004. President Bush's proposed $2.4 trillion election-year budget includes $7.76 billion for EPA down from the $8.4 billion that Congress allocated for EPA in the current budget

year.

EPA Administrator Mike Leavitt, who is nearing the 90-day mark after taking the reins of the agency from Christine Whitman, said the budget allocates "substantially more money" than prior years. "With the President's budget, we can increase the velocity of environmental protection," Leavitt told reporters. Leavitt pointed to a $133 million boost from EPA's 2004 request of $7.63 billion to remove toxic sludge from the Great Lakes and make school buses burn cleaner fuel.

However, some lawmakers and environmental groups criticized the budget as hindering U.S. environmental initiatives. "This budget not only shortchanges our environment, it challenges our nation's role as a global environmental leader," said independent Sen. Jim Jeffords of Vermont. In a statement, Jeffords pointed out that the budget cuts $492 million, or 37 percent, from a revolving fund which states use to upgrade sewage and septic systems and storm-water run-off projects.

46. EPA's Flexible Ozone Implementation Program Proceeding

An experimental U.S. EPA program allowing more than 30 metro areas a flexible alternative in meeting national standards for ground-level ozone pollution takes a significant step forward next month when local officials submit their cleanup plans to state permitting authorities. The voluntary "Early Action Compacts" aim to push cities and counties with ozone-related air quality problems to fulfill their federal air pollution requirements by the end of 2004, nearly three years before other highly polluted regions must begin making progress toward compliance with EPA's new eight-hour ozone standard.

Environmentalists say that while the early action concept sounds promising, they are concerned EPA lacks authority under the Clean Air Act to undertake the program. They also note that the compacts may cause delays in reducing air pollution if EPA does not enforce the plan's designated milestones.

Government officials at the federal, state and local levels say they are enthusiastic about the flexible approach, noting that the early stages of the compact writing process have brought political and business leaders into the Clean Air Act debate in a manner not seen with other programs.

Early Action Compacts first emerged nearly four years ago in Texas when state and local officials considered what the new eight-hour ozone standard would mean for Austin and San Antonio, cities that had struggled to comply with the old and less stringent one-hour ozone threshold. Texas environmental officials pressed their federal counterparts to consider giving credit to an area if it took voluntary, early steps toward improving its air quality. After the ozone standards survived legal challenges from industry in the Supreme Court and U.S. Circuit Court of Appeals for the District of Columbia, the idea of an early implementation program regained traction. In all, 33 metropolitan areas have signed up for the Early Action Compact program, including 11 regions in South Carolina, seven counties in and around Denver and five counties comprising the Memphis, Tenn., metro area, including municipalities in Arkansas and Mississippi.

On April 15, EPA is required to name which areas of the country do not meet the 8-hour ozone standards, a stigma that local and state business and government leaders are trying to avoid.

But for the areas that have participated in the ozone compact program, each will receive the nonattainment designations with an all-important asterisk indicating they are on a separate schedule to clean up their air.

The compact's participants must follow a rigid schedule spelled out by EPA, including next month's requirement to specifically identify programs it will use to reduce its emissions. The areas also must complete emission modeling and have a plan that covers potentially new sources of air pollution. The individual plans are expected to range in size and scope as officials cull together mandatory items, such as the purchase of low-polluting vehicles for government fleets to new inspection and maintenance programs. Other voluntary measures could include education campaigns and free or reduced fares for public transportation on poor air quality days.

All of the areas participating in the Early Action Compact program must meet the new ozone standards by Dec. 31, 2007. Otherwise EPA will push them back into the normal attainment process. That includes a series of more stringent pollution control requirements, such as New Source Review permitting for local industries. If an area fails to meet one of three other milestones before the final deadline, including a June 30, 2006, target to certify it is making progress, EPA again would step in and return it to the normal process.

47. San Francisco To Decide If Toll Hike Should Fund Transit Revamp

San Francisco Bay area voters will decide March 2 whether they should increase bridge tolls to pay for a major renovation project on the regional transportation system. If Regional Measure 2 were to pass, motorists would pay $3 -- a $1 increase -- beginning July 1 to cross each of seven state-owned bridges. The purse of $125 million per year would be earmarked for 39 projects total, Bay Area Rapid Transit officials said. The project would be the region's biggest transit renovation in more than 15 years.

San Francisco ranked second to Los Angeles for worst traffic in the country in a 2002 study by Texas Transportation Institute, which said traffic jams cost the economy $58.5 billion in lost productivity and $9 billion in wasted fuel in 2000. The March ballot initiative would encourage more commuters to use mass transit, supporters said. Many environmental groups, including Greenbelt Alliance, Save the Bay, Sierra Club and Urban Ecology, said they are on board with the measure.

48. Bush Administration Distorts Science, Group Says

An environmental group has accused the Bush administration of suppressing and distorting scientific findings on the environment, public health and safety that run counter to its own policies. The Union of Concerned Scientists said in a report that the administration had suppressed research on global warming, air quality, sexual health, cancer and other issues. It said there had been a wide-ranging effort to manipulate the government's supposedly independent scientific advisory system "to prevent the appearance of advice that might run counter to the administration's political agenda."

The group, which includes Nobel-winning researchers as well as environmental and political activists, said in its report that Congress "should ensure that this administration and

future administrations reverse this dangerous trend."

The White House denied the accusations. "I can assure you that this is an administration that makes decisions based on the best available science," President Bush's spokesman Scott McClellan said. He also said that the Bush administration had "worked on an independent peer review process to look at how science is used in regulatory decisions."

The UCS reviewed a number of already published allegations, including complaints that the federal government had deliberately disregarded a worldwide consensus that human industrial activity is to blame for much of the steady warming of the planet's climate over the past century. Groups such as the Intergovernmental Panel on Climate Change, the American Geophysical Union and the National Academy of Sciences - itself an independent group appointed to advise the government - all agreed that human-caused emissions must be curbed. Officials changed an Environmental Protection Agency annual air pollution report to remove a section on climate change, and the group said investigations pointed to the White House Council on Environmental Quality and the Office of Management and Budget as the source of the changes.

Similarly, it said, the White House manipulated EPA documents on mercury emissions and their effect on people, so frustrating Environmental Protection Agency employees that they leaked the originals to the media.

Public health groups have long complained that the White House changed advice from the Centers for Disease Control and Prevention to support the administration's abstinence-only sex education policy. They have said it removed from the CDC's Web site a CDC fact sheet on condom use as well as a report showing that abstinence-only education programs may not actually prevent pregnancies. "At the behest of higher-ups in the Bush administration, according to a source inside the CDC, the agency was forced to discontinue a project called 'Programs that Work', which identified sex education programs found to be effective in scientific studies," the report reads. The group said it took a New York Times report and a public outcry to reverse a decision to post on the National Cancer Institute's Web site a report that falsely linked abortion to breast cancer.

It also said the administration appointed scientific advisers who were not fully qualified for their posts but who supported Bush policies, something the White House has also denied.

49. Mercury Damage Seen in Children of Fish Eaters

Children whose mothers eat seafood high in mercury while pregnant can suffer irreparable brain damage, researchers reported last week. The report comes the same week as the U.S. Environmental Protection Agency doubled its estimate of how many newborns had unsafe levels of mercury in their blood. The study, done by an international group led by researchers at the Harvard School of Public Health, also showed that children exposed to mercury in the womb may suffer permanent damage to their heart function.

"We found that both prenatal and postnatal mercury exposure affects brain functions and that they seem to affect different targets in the brain," Philippe Grandjean, who led the study, said in a statement. Grandjean and

colleagues studied more than 1,000 mothers and children living in Denmark's Faroe Islands. Residents there eat large amounts of fish, much of it contaminated with mercury.

They measured mercury in umbilical cord blood taken from the children at birth and then in hair samples taken at ages 7 and 14. Most of the mothers were suffering from mercury contamination, with their own hair levels at childbirth on average above 1 microgram per gram, the limit recommended by the EPA and the independent, nongovernmental National Research Council.

Writing in the Journal of Pediatrics, Grandjean and colleagues in Denmark and Japan said they put electrodes on the heads of the children to measure electrical signals in the brain. They found delays in brain signaling, and the higher the mother and child's mercury load at birth, the more distinct the irregularities.

They also found these neurological changes affected heart function. The children with the most mercury in their blood were less capable of maintaining the normal variability of the heart rate needed to secure proper oxygen supply to the body, Grandjean's team found.

Earlier this week an EPA researcher published a report doubling the estimates of how may U.S. infants have unsafe levels of mercury in their blood. The researcher, Kathryn Mahaffey, estimated that 630,000 infants were born in a 12-month period between 1999 and 2000 with blood mercury levels higher than 5.8 parts per billion, the EPA's level of concern. This is more than double the previous estimate of 300,000 infants. "It is important to note that this estimate is preliminary in nature, and is based on recently available information about mercury in umbilical cord blood versus maternal blood," Mahaffey said in a statement.

50. EPA To Hold Hearings On Mercury 'Hot Spots'

A series of hearings are being held across the country to try to address whether the Bush administration's proposed cap-and-trade system for mercury emissions would create "hot spots" of the toxic chemical. The U.S. EPA published its proposed regulation to control mercury emissions from power plants through a cap-and-trade system in the *Federal Register* earlier this month. The rule is now in a 60-day public comment period before it may become finalized.

The mercury regulation, signed by EPA Administrator Mike Leavitt on Dec. 15, 2003, offers two distinct approaches. The Bush administration's stated preference would allow the trading of emission credits among the nation's coal- and oil-fired power plants in a manner similar to the program now being used to control acid rain under the Clean Air Act's 1990 amendments. The proposed mercury caps, set at 34 tons in 2010 and 15 tons in 2018, are the same as in a recently modified version of President Bush's "Clear Skies Initiative," a legislative plan that has faced significant hurdles on Capitol Hill.

Environmentalists have argued that individual plants should be subject to restrictions on mercury emissions because it tends to concentrate near its source more than other pollutants.

Jeffrey Holmstead, EPA administrator for air quality issues, said, "Based on the information we now have, we don't think there is a concern of hot spots."

The meetings will be held in Chicago, Philadelphia and Research Triangle

Park in North Carolina.

51. Scientists Say US Must Do More to Stem Air Pollution

Though some progress has been made, the U.S. government should do more to clean up air emissions spewed by coal-burning power plants and measure their human health impacts, an expert panel said. "Despite substantial progress in improving air quality, the problems posed by pollutant emissions in the United States are by no means solved," the National Academies' National Research Council said in a report that notes both improvements and shortcomings since Congress passed the Clean Air Act in 1970.

The U.S. Environmental Protection Agency, charged with enforcing the act, should take a wider approach to reduce emissions that cause acid rain, haze and respiratory diseases, said the academy, an independent group that makes scientific recommendations to Congress.

The Bush administration has proposed that U.S. utilities reduce emissions of nitrogen oxides, sulfur dioxide and mercury by about 70 percent over the next 15 years through a cap-and-trade system. The report, which does not specifically address administration environmental plans, found that such trading programs should be expanded to cover multiple emissions.

Emissions from coal-burning power plants and factories have been reduced by installing high-tech equipment at newer facilities, but older plants "continue to be a substantial source of emissions," the report said.

Meanwhile, the EPA needs to bolster its monitoring of the health impacts of toxic air emissions from power plants as well as off-road vehicles and heavy-duty diesel trucks, the report said. "Current risk assessment and standard-setting programs do not account sufficiently for all the hazardous air pollutants that may pose a significant risk to human health," it said.

The government should also weigh the effects of global warming when crafting clean air legislation, it said. The administration has adamantly opposed mandating reductions of heat-trapping carbon dioxide, citing the economic damage caused by compliance costs pegged in the billions of dollars.

52. Overseas Automakers Plan To Introduce High-Tech Diesel In U.S.

A number of foreign automakers are looking to bring a new generation of diesel-powered passenger vehicles to market that meet strict new EPA emissions guidelines, according to government sources familiar with proprietary testing going on at EPA facilities in Michigan. This comes at a time when top EPA officials have begun to tout new diesel technology as an efficient, relatively near-term strategy for improving the fuel economy of the passenger vehicle fleet and reducing greenhouse gases. It also comes at a time when state regulators are considering prohibiting sales of the current generation of diesel vehicles because of air quality commitments to the EPA.

Five vehicle models are undergoing emissions testing and at least one continues to meet the Tier II, Bin 5 emissions standards after 50,000 miles using ultra low-sulfur diesel as fuel. Federal Tier II regulations took effect at the beginning of the year. Automakers have been reluctant to bring diesel-technology to market if the vehicles will not meet emissions standards after the

Tier II standards are completely phased-in by the end of the decade.

Even though diesel vehicles would help the Big Three in their perpetual struggles to meet federal fuel economy standards, none of the five diesel vehicles being tested are from Detroit, an informed source said. As Margo Oge, director of EPA's Office of Transportation and Air Quality, pointed out at a recent environmental vehicle conference in Washington, D.C. diesel-engines can be as much as 40 percent more fuel efficient than similar sized gasoline engines. She went on to say market penetration of diesel vehicles comparable to that in Europe could save 1 billion barrels of oil per day, saving consumers $20 billion annually, while substantially reducing emissions of greenhouse gases.

All five of the vehicles being tested are from foreign manufacturers. One of the vehicles being tested is a sport utility vehicle, which continues to meet the Tier II, Bin 5 standard after 50,000 miles, Oge said. The vehicles rely on particulate matter traps and NOx adsorption technology.

Diesel technology has been hugely controversial in the U.S. California health officials have labeled diesel emissions a severe health hazard. It has been implicated in increased incidences of asthma and other respiratory ailments.

New California emissions regulations that took effect in the beginning of the year further complicate EPA's newfound fondness for diesel technology. The regulations are even stricter than EPA's. Automakers are reluctant to introduce vehicles not meeting California emissions standards because the state represents 10 percent of U.S. passenger vehicle sales. And a handful of Northeast states, including New York also have adopted California's stricter emissions standards.

For example, there is a battle in Maine over whether to ban the sale of diesel passenger vehicles, because Maine has adopted California's strict vehicle emission standards. Those standards neither relate to fuel economy per se or greenhouse gas emissions targets, but instead regulate the amount of harmful, ozone-creating tailpipe emissions cars produce, such as NOx and volatile organic compounds. Up until this year, the cars met Maine's -- and California's -- emission standards, but now that LEV II has gone into effect, these cars can no longer be sold, according to an official with the Maine Department of Environmental Protection (DEP). The cars do meet federal emissions standards for diesel vehicles, and will be able to meet the LEV II standards once ultra low-sulfur diesel fuel regulations become effective in 2006. Because of this automakers are arguing Maine should provide an exemption based on that assumption.

In Europe the rapid growth in the number of diesel vehicles on the road has been fueled by two factors. First the automakers trended towards diesel technology to comply with the voluntary greenhouse gas reductions goals they set at the urging of the European Union. Secondly, taxes on diesel fuel are substantially lower than those of gasoline in Europe.

ASIA-PACIFIC

53. Toyota Overtakes Ford as No. 2 Auto Maker

Japan's Toyota Motor Corp has unseated Ford Motor Co as the world's second-biggest auto maker. The long-anticipated switch came as the U.S. "Big

Three" lost customers to Japan's top auto makers in their own backyard last year, and as Toyota drove aggressively into the red-hot Asian car market.

Toyota is steadily marching toward its goal of grabbing 15 percent of the global car market some time in the next decade, from about 11 percent now. That share could put Toyota ahead of General Motors, which said it had 14.7 percent in 2003.

Toyota said yesterday its group - which includes truck maker Hino Motors and minicar maker Daihatsu Motor - sold 6.78 million vehicles last year, up 10 percent from 2002 as it boosted its presence in every major car market.

That was 60,000 more than the 6.72 million vehicles sold by the family of Ford cars, which groups together Ford brand, Mercury, and luxury marques Lincoln, Volvo, Jaguar, Land Rover and Aston Martin.

While the new ranking marks a symbolic shift in the global auto industry's balance of power, analysts have long argued that rating auto makers by their sales volume is just that: symbolic. Indeed, at over $120 billion, Toyota's market capitalization - a measure of how much investors believe a company is worth - is more than four times that of Ford, and bigger than the combined stock values of Ford, GM and DaimlerChrysler

By profitability, too, Toyota is way ahead of the pack.

Its bottom-line profit came to around $7 billion last business year - by far the highest in the industry - and is expected to jump another 27 percent for the year to March 31.

Meanwhile, Ford earned a net $495 million in 2003, returning to the black for the first time in three years. Analysts expect a fivefold increase in earnings this year. Ford has also been burdened by financial ills. While its automotive business has $26 billion in cash, it also has billions in pension and health-care obligations, and its rating from Standard & Poor's stands one grade above "junk." Executives have committed to rolling out new products fast, but models already in the pipeline and due out over the next couple of years will cost more than the vehicles they replace, forcing Ford to scour its business for cost cuts.

In contrast, Toyota has a cash pile of $20 billion, enabling it to spend freely on the development of next-generation environmental and other technology which could give it an edge when and if governments introduce stricter regulations.

The new ranking will be seen as a loss of face by Ford, an American icon that has held the number-two spot behind GM for over 70 years - longer than Toyota has been in business. The milestone coincided with its centennial, no less.

Ford executives have publicly shrugged off the event, saying it had deliberately chosen to maximize profits instead of sales.

54. Proposals For Australian Emission Standards

The Australian Government's Motor Vehicle and Environment Committee (MVEC) has issued its draft proposals for emissions requirements beyond 2006. ADR (Australian Design Rule) 79/02 will cover light duty vehicles and ADR 80/02 will cover heavy vehicles. For light duty vehicles, the MVEC is proposing the adoption of Euro 4 emission standards from 1 January 2008 for new models and 1 January 2009 for all production. 50 ppm sulphur

95 RON petrol will be mandated from 1 January 2008, with 10 ppm sulphur introduced from 1 January 2010.

For heavy vehicles, the MVEC is proposing Euro V emission standards be adopted from 1 January 2009 for new models and 1 January 2011 for all production. 10 ppm sulphur diesel will be required from 1 January 2009. US 2007 or Japanese 05 standards would be accepted as alternatives.

55. South Korea Plans Regional Emissions Cap, Trading Schemes

South Korea's National Assembly has passed a bill that enacts a landmark environmental law aimed at cleaning up the air in the nation's economic heartland by introducing regional and single-source emissions caps and a regional emissions trading scheme. The bill (No. 163022), approved by Parliament Dec. 18, will put into force the Special Act on the Improvement of Air Quality in the Capital Region from January 2005, giving the Ministry of Environment and local governments unprecedented authority to control emissions from industrial sites and automobiles.

The stated purpose of the new law is to improve air quality in and around South Korea's capital city of Seoul, bringing it from its current status as one of the most polluted cities within members of the Organization for Economic Cooperation and Development to a level comparable to other developed countries within 10 years.

"End-of-pipe pollution control is no longer a workable solution to the air pollution problem in and around the capital," said Ahn Moon-soo, director of the Air Quality Policy Division at the Ministry of Environment. "The new law will provide the basis for a transition to preventive air quality management."

The bill became law once it was signed by President Roh Moo-hyun on December 31. According to the Ministry of Environment, which pushed through the legislation despite opposition from industry and the pro-industry Ministry of Commerce, Industry, and Energy, the air quality in Seoul measured by the density of airborne particulate matter and nitrogen dioxide (NO_2) is very serious. With a population of more than 10 million people, Seoul accounted for 96 percent of nationwide ozone alerts in 2002, 80 percent of South Korea's NO_2 exceedances and 64 percent of particulate matter exceedances.

The ministry estimated the total economic cost of air pollution in the region last year to be 10 trillion won ($8.4 billion), including the cost of treating related respiratory ailments.

Under the legislation, the ministry will work together with provincial and municipal governments to set and enforce controls on annual permissible emissions of nitrogen oxides, sulfur oxides, and particulate matter.

Businesses located in the central province (including Seoul) and generating emissions at or above a certain level will be allotted individual emissions quotas within the regional limits. They will then be allowed to buy and sell emissions quotas to meet their individual targets.

The emissions trading scheme will become operational in July 2007, two-and-a-half years after the rest of the legislation is due to take effect, in order to allow companies time to make operational adjustments.

The operators of regulated facilities will be responsible for measuring and reporting their emissions. The ministry

will have the power to impose surcharges on emissions generated in excess of annual quotas and impose restrictions on the construction of new facilities.

The law also allows the ministry to intervene in the region's automobile markets to encourage sales of low emission vehicles by setting minimum quotas of low emission vehicles that should be available on the market, and by requiring government agencies and other public organizations in the region to purchase low emission vehicles up to a certain percentage of their fleet.

The ministry plans to prepare more detailed regulations, such as enforcement rules and decree provisions through 2004. These rules and provisions made under the new law will supersede relevant rules and provisions in the existing Air Quality Preservation Act.

Minister of Environment Han Myeong-sook has pledged to make the air in and around the capital city of Seoul as clean as in other developed countries within 10 years.

"The particulate matter density in Seoul should improve to the level of Tokyo, and its concentrations of nitrogen dioxide get down to the level of Paris by 2012," she said during a Dec. 19 speech to the Korea Chamber of Commerce and Industry.

56. Air Quality Tops Hong Kong Environmental Agenda

Hong Kong's main environmental concerns this year will be addressing air pollution, encouraging clean energy, and building new, large-scale waste treatment facilities.

Hong Kong continues to suffer from serious air pollution despite long-standing efforts to eliminate sources of pollution. Government officials and environmentalists blame heavy automobile traffic and industrial pollution from China's neighboring Guangdong province that blows across the border to the Hong Kong Special Administrative Region.

This year, according to the Hong Kong Environment, Transport, and Works Bureau's "2004 Policy Agenda," the government will push forward several new and continuing initiatives to rein in air pollution. In a report Jan. 14 to a special legislative committee on environmental issues, bureau officials mapped out plans for cooperating more closely with Guangdong to reduce industrial air pollution there.

Apart from working with officials in mainland China, the Hong Kong government plans to further develop a system of tax incentives to discourage the use of diesel-fueled vehicles and to promote use of natural-gas powered automobiles in the city.

Already, Hong Kong officials credit the program with ensuring that 80 percent of new buses on the road since 2002 are powered by natural gas.

Environmental protection officials said they also will continue with an initiative begun in 2001 to modify heavy-diesel vehicles so they conform to European emission standards. Modifications will become mandatory by the end of the year.

In addition, the bureau will ask the legislature to approve a measure this year to require that gas stations capture and reuse waste gasoline vapors emitted into the air.

On the regulatory side, all new motor vehicles licensed in Hong Kong will

have to meet Euro IV standards by 2006, and gasoline sold also must meet Euro IV standards by 2005, according to the Environmental Protection Department. The standards place strict limits on pollutants produced by combustion engines.

57. Japan to Set Standards for Ship Exhaust, Refuse Entry for Violators

Japan plans to begin regulating exhaust gases from oceangoing and large coastal ships from 2005 in line with International Maritime Organization standards, and to deny foreign flag carriers that fail to meet emission standards entry into Japanese ports, officials of the Ministry of Land, Infrastructure, and Transport and the Ministry of the Environment have announced. The IMO in 1997 adopted a protocol to amend its MARPOL 73/78 convention and added a new annex, Annex VI, titled Regulations for the Prevention of Air Pollution from Ships. That protocol is expected to pass the threshold of ratification by 15 IMO members required to enter into force by the end of this year and to take effect in 2005, according to Japanese officials. So far, 11 countries have ratified, according to the IMO Web site.

In response, the two Japanese ministries are drafting emissions standards with the aim of reducing ship exhausts of sulfur oxides and nitrogen oxides by 10 percent from the present level, the officials said. Most Japanese oceangoing vessels should be able to clear the initial regulation levels, but if the IMO steps up the protocol, Japanese ships would have to upgrade to cleaner engines.

In the greater Tokyo area, SOx from ships accounts for as much as 19 percent of total SOx releases, and in the greater Kansai area (including Osaka, Hyogo, and Kyoto), it accounts for as much as 46 percent, according to MOE data. Ship NOx accounts for 6.7 percent of the total in the greater Tokyo area and 16 percent in the greater Kansai area.

After the amendments, vessels with engine revolutions per minute of 2,000 or greater must keep NOx emissions at less than 9.8 grams per kilowatt hour and will be prohibited from using fuels that contain more than 4.5 percent sulfur, according to a MLIT official. This would mean that oceangoing vessels must be mounted with engines manufactured after 2000, which most already have installed, while coastal vessels would have to mount engines manufactured after the ratification of the convention.

58. ASEAN Officials to Take Action To Improve Region's Urban Environment

Environment ministers from across Southeast Asia endorsed at a Dec. 16-19 summit in Yangon, Myanmar, a framework for governments to develop policies for improving environmental conditions in the region's cities. The "Framework for Environmentally Sustainable Cities in ASEAN" calls on members of the Association of Southeast Asian Nations to implement measures to boost urban air and water quality and to improve waste collection and treatment.

Loh Ah Tuan, chairman of the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) and director-general of environmental protection at Singapore's National Environment Agency, said that as part of the initiative, a list of "best practices" would be drafted in the next few months to serve as "the basic building blocks to

achieving a quality living environment in any city--clean air, clean water, and clean land."

ASEAN members include Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar (Burma), the Philippines, Singapore, Thailand, and Vietnam.

The framework will include targets for ambient air quality and for water quality in catchments and underground sources used in water supply in all ASEAN cities. The framework calls on ASEAN governments to improve urban air quality by tightening emission standards for vehicles and factories, promoting cleaner fuel sources, increasing zoning and segregation of "heavily polluting" industries, and reviewing national environmental impact assessment standards to ensure they sufficiently address air quality concerns.

It also calls for more stringent screening of industries to ensure wastewater quality is sufficiently monitored and effluent is not discharged directly into the urban water supply. Governments should also require industries to install their own waste treatment systems so water pollution can be treated at the source, the framework says.

The framework also addresses solid waste issues, which it calls "clean land issues," with governments agreeing to implement city-wide recycling programs, set waste disposal fees that reflect the full costs of treatment, and encourage companies to reduce waste through the imposition of packaging taxes and take-back laws. ASEAN member countries had "yet to set" a target date for achieving the "clean land" goals.

Though the framework, like most ASEAN agreements, is not legally binding, it represents a set of "comprehensive policies, strategies, and activities that will facilitate the attainment of environmental sustainability by ASEAN cities, notwithstanding their diverse circumstances." The framework also would promote partnerships among ASEAN city officials and facilitate contacts among individual governments and international organizations to help secure institutional, technological, and financial support for their efforts to improve the urban environment.

At the Yangon meeting, ministers also endorsed the "Yangon Resolution on Sustainable Development," in which they agreed to meet the commitments that emerged from the 2002 World Summit on Sustainable Development in Johannesburg, as well as to "harmonize environmental policies, legislation, regulations, standards, and databases," and to "pursue the idea of creating an ASEAN Environment Fund."

The summit also resulted in the "ASEAN Declaration on Heritage Parks," which commits governments to step up cooperation in the management and conservation of protected areas throughout the region.

59. Japan to Regulate Emissions of Volatile Organic Compounds

Japan plans to start regulating emissions of volatile organic compounds (VOCs) as early as 2005 in a bid to curb the country's growing smog problem according to the Ministry of Environment. In response to a report that called for regulating VOC emissions and which was endorsed Feb. 3 by the ministry's subcommittee on atmosphere and the environment, the ministry has begun drafting legislation to amend the Air Pollution Prevention Law. Once the proposed legislation is approved by the Cabinet, the government will submit it to the current session of the Diet (parliament). If the Diet enacts the

Environment Ministry's proposal during the current session, which runs through mid-June, the ministry would implement the law in early 2005.

The report approved by the subcommittee urged restricting releases from stationary sources such as automotive paint and body shops and printing houses, since smog-causing emissions from motor vehicles have been substantially pared back over the past 30 years.

Although VOCs are regulated as toxic substances in Japan, the country has yet to promulgate regulations governing discharges of VOCs into the air.

The six-page report approved by the ministry subcommittee noted that despite years of attempts to grapple with Japan's air quality problems, including implementation of tougher vehicle emission laws on nitrogen oxides and particulate matter, the country's smog problem remains serious. "In recent years, [smog] warnings are issued for as many as 200 days in more than 20 cities" each year, the report said. "This is the same serious level as in the early 1950s [when Japan did not regulate emissions from factories and motor vehicles]." While smog has regularly plagued Japan's largest cities, such as Tokyo and Osaka, it is now becoming a serious problem in other cities as well. For example, Chiba in 2002 issued a smog warning for the first time in 18 years, the report said. Chiba is 30 miles east of Tokyo.

The report also said reducing VOC emissions is vital for preventing further depletion of the Earth's ozone layer.

The subcommittee-approved report recommended regulating facilities that emit large volumes of VOCs, such as automobile body paint shops, printing plants, operations that use VOCs for drying chemical products, industrial operations that use VOCs for cleaning and drying, glue manufacturers, and places that store VOCs. Numbering in the tens of thousands, these mostly small businesses have not been subject to VOC regulations because of their limited financial ability to refurbish facilities to stop release of VOCs.

The report sought to identify stationary sources responsible for the bulk of VOC releases because emissions of nitrogen oxides and particulate matter from motor vehicles have been slashed to within only a few percentage points of the emission levels logged in the mid-1970s.

60. Japan to Strengthen Carbon Emissions Reductions Program

Since carbon emissions in recent years have shown no real decline, Japan will have to assign specific emission-reduction targets to industries, offices, and households, a key Japanese government policy and advisory panel concluded. Members of the Global Environment Subcommittee had agreed to begin active discussions on the issue in February with the aim of working out a comprehensive proposal by June, when the government is to review its program for reducing carbon dioxide emissions. The subcommittee is part of the ministry's Central Environmental Council, and it held its first meeting on the subject Jan. 30. It was the first time the Japanese government held a formal meeting to discuss the CO_2 reduction quotas.

Under the Kyoto Protocol climate change treaty, Japan has committed to cutting its CO_2 emissions 6 percent by 2012 from 1990 levels. While still essentially voluntary, the new targets that the panel would hammer out in June will set reduction targets for each

company and household. As the base for calculating targets, the panel would use for references the voluntary reduction program of Nippon Keidanren (the Japan Business Federation) and various industry associations.

Japan introduced in 1998 its first greenhouse gas reduction program, which covered the country's "first implementation period" of 2000-2004. The government revised the program in 2002. The program set voluntary emission-reduction targets for the household, office, industry, and transport sectors. For example, it set a 7 percent reduction target by 2008-2012, from 1990 levels, for the industrial sector and 2 percent each for the household and office sectors.

This summer or early fall, the Japanese government is expected to complete tallying national greenhouse gas emission statistics of fiscal year 2002, which ended March 31, 2003. Based on that data, Japan will review and update the existing reduction program for implementation in the plan's second implementation period of 2005-2007. Results to date have not been encouraging. In 2001, which was the latest data year, emissions were up as much as 8.2 percent from 1990 levels, according to MOE statistics.

MOE believes Japan will not be able to meet its commitment to reduce carbon dioxide emissions 6 percent by 2012 without instituting a range of measures, including: carbon taxes, a shift in shipping transportation from trucks to coastal shipping, reducing traffic congestion, and setting carbon emission reduction targets for all relevant sectors. That position is meeting strong resistance from the Ministry of Economy, Trade, and Industry and the Ministry of Land, Infrastructure, and Transport, as well as from the business community led by Keidanren. These entities favor the continue use of voluntary reduction efforts.

61. Low-Emission Vehicles Exceed the 5.7 Million Mark

Japan's Ministry of Land, Infrastructure and Transport (MLIT) reported on December 9, 2003 that the number of registered low-emission vehicles (LEVs) reached 5.75 million as of the end of September 2003, accounting for about 11.4% of all vehicle ownership.

Fuel efficient vehicles that contain fewer harmful substances in their exhaust qualify as LEVs. Currently, five types of vehicles are designated as LEVs, namely, electric vehicles, methanol-fueled vehicles, CNG (compressed natural gas) vehicles, hybrid vehicles, and fuel-efficient, low-emission gasoline-fueled vehicles.

LEVs are classified into three grades according to their emission of particulate matters, nitrogen oxide (NOx), formaldehyde, etc. The emissions are measured and compared with the current exhaust regulation values for each type of vehicle. Cars with emissions reduced by 25% or more but less than 50% are certified as "good: low-emission"; those with emissions reduced by 50% or more but less than 75% are classified as "excellent: low-emission"; and those with emissions reduced by 75% or more are classified as "outstanding: low-emission." LEV-certified cars have a sticker that indicates the car's grade.

The rate of LEVs among newly registered cars was 21.1% in the latter half of FY2000 (October 2000 to March 2001), but tripled to 64% in the first half of FY2003 (April 2003 to September 2003), which means that two out of three newly registered vehicles were LEVs. The sales of LEVs began growing

as a result of the automobile green tax system MLIT introduced in FY2001. If this trend continues, it is likely that the target of 10 million LEVs by 2010 can be achieved some years in advance.

GENERAL

62. HEI Report Indicates Potential Health Concerns With MMT

A new report published by the Health Effects Institute (HEI) examines the mechanisms for transport of manganese in and out of the brain. Although manganese is an essential nutrient, it has been shown to cause neurotoxic symptoms in workers that inhale high concentrations of this element. Manganese is the inorganic constituent in the gasoline octane-boosting fuel additive methylcyclopentadienyl manganese tricarbonyl (MMT). Investigators confirmed in this recent study that manganese is transported into the brain by carrier-mediated transport. Transport of manganese out of the brain, however, was found to occur only via a relatively slow diffusion-based process. These findings suggest that no mechanism exists to protect the brain from accumulating manganese that would be introduced through environmental exposure to manganese. The researchers conclude that this potential for manganese accumulation in the brain needs to be included in any health risk analysis related to environmental exposure to manganese.

MMT is used in Canada but rarely found in the US. EPA allows it in conventional gasoline at a level of 1/32 g/gal manganese, but the product is now in only 0.3% of the US gasoline pool. Somewhat unexpectedly, high concentrations were recently found at gas stations selling unbranded fuel in Belgium.

MMT's sole manufacturer, Richmond, Va.-based Ethyl Corp., is expected later this year to submit emissions and toxicity tests the agency will use to review the additive's future use in conventional and clean fuels.

Some refiners outside of North America also are mulling MMT. But given that methyl tertiary butyl ether-also touted to be a clean fuel product and octane enhancer-has now been banned in some US states, MMT may wind up competing with MTBE for international markets.

HEI's research report found "convincing evidence" that manganese, like lead, has the potential to accumulate in the brain under prolonged exposures, even at relatively low levels. University of Kentucky researchers Robert Yokel and Janelle Crossgrove investigated the mechanism by which manganese enters and exits the brain across its protective blood-brain barrier. The two scientists said their work with laboratory rats suggests the brain may not efficiently protect itself from unhealthy buildups of the metal.

"This finding has important implications for neurotoxicity resulting from chronic manganese exposure," HEI said. "Although Yokel and Crossgrove studied manganese transport rates in rats, their observations may be relevant to humans because transport mechanisms at the blood-brain barrier are similar in rodents and humans."

HEI said their results support the current understanding that the potential for manganese accumulation in the brain should be considered when assessing risk from exposure to manganese in the environment. They said future studies and risk assessments also should consider susceptible populations, such as people with iron deficiencies or liver

disease, who may be at greater risk from increased manganese uptake.

Complying with a 1996 court order, EPA allowed MMT back into US conventional gasoline after a 2 decade absence. But the agency will revisit the issue after Ethyl submits its own toxicity and pollution data sometime this year.

Automakers have never liked MMT, and it's unlikely Ethyl's data will change their minds. An automaker 2002 study found the additive can increase smog, reduce fuel economy, and cause low-emission vehicles to fail hydrocarbon emission standards. Ethyl said at that time that the automaker studies were seriously flawed and there has never been convincing evidence to suggest MMT harms emission control systems.

63. U.N. Committee Recommends Addition Of Three Chemicals To PIC List

The International Chemical Review Committee recommends three chemicals be added to a list of hazardous substances subject to trade controls under the Rotterdam Convention on prior informed consent (PIC), including two types of lead used in gasoline and the pesticide parathion. The treaty's Intergovernmental Negotiating Committee will decide in September whether to formally implement the recommendations.

Meeting in Geneva Feb. 2-5, the convention's Interim Chemical Review Committee (ICRC) agreed to recommend that tetraethyl lead and tetramethyl lead be added to the control list. Both chemicals are used as additives in leaded gasoline. In addition, the ICRC agreed to recommend the addition of the pesticide parathion to the list.

The recommendations will now go on to a Sept. 18 meeting of the convention's Intergovernmental Negotiating Committee for formal approval.

The Rotterdam Convention requires countries exporting chemicals or pesticides that are banned or severely restricted at home to notify the importing country beforehand and to receive the importing country's prior consent before the shipment is sent. Items on the convention's PIC list are subject to the notification requirements.

Jim Willis, head of the chemicals division at the United Nations Environment Program, said the decision to subject tetraethyl lead and tetramethyl lead to PIC controls should boost efforts to phase out the use of leaded gasoline worldwide.

"Most countries are in agreement to eliminate the use of leaded gas," Willis noted. The decision to list the two chemicals "will be a key tool in making that a reality. We should see an acceleration in reducing leaded gasoline use."

The Rotterdam Convention is being implemented on a voluntary basis pending the formal entry into force of the agreement on Feb. 24. The first conference of the parties (COP-1) to the convention is scheduled to take place in Geneva Sept. 21-24, at which time the new additions to the PIC list will be made binding.

64. Air Pollution May Significantly Worsen Respiratory Allergies

California researchers have found that airborne components of diesel engine exhaust significantly worsen allergy symptoms in people with a certain genetic makeup. Researchers from the Keck School of Medicine of the

University of Southern California and the David Geffen School of Medicine at UCLA have found that genetic characteristics seen in about half the population leave allergy-sufferers particularly susceptible to the effects of diesel particles. Results appear in the Jan. 10 issue of Lancet.[1]

"We've known that diesel exhaust particles worsen symptoms in individuals who respond to allergens, such as pollen, but this study suggests a direct way that pollution could be triggering allergies and asthma in a large number of susceptible individuals, and perhaps a new route of intervention," says Frank D. Gilliland, M.D., Ph.D., professor of preventive medicine at the Keck School and the study's lead author.

Exposure to air pollution is related to numerous health effects, including respiratory allergies. In this study, researchers sought to understand how pollutants from diesel exhaust might cause inflammation in the lungs. Diesel exhaust particles are thought to act by causing the production of molecules called reactive oxygen radicals in the lungs' airways. In response, the immune system pumps out substances that cause allergy symptoms. But compounds called antioxidants can detoxify these particles and temper the body's allergic inflammatory response. Researchers suspect that the better the body can use antioxidants to defend itself, the better it can protect itself from airborne pollutants.

With that in mind, researchers investigated a family of antioxidant-related enzymes found in the lungs. Two of these enzymes are called glutathione S-transferase M1, or GSTM1, and glutathione S-transferase P1, or GSTP1. The GSTM1 and GSTP1 genes are responsible for creating each of the enzymes, which help the lungs detoxify pollutant products and defuse oxidants before they can cause damage.

GSTM1 occurs in two common forms in the population-either "present" or "null." Differences between present and null forms are small, but they may mean a lot. People born with two of the null form of the gene cannot produce the GSTM1 protective enzyme at all. About 50 percent of the population falls into this category.

Meanwhile, the GSTP1 gene can occur with a common variation called ile105. People born with two of the ile105 form of the gene produce a less-effective form of the GSTP1 enzyme. This less-effective form occurs in about 40 percent of the population.

In this clinical trial, the research team enrolled 19 people with known allergies to ragweed. They sampled participants' DNA to discern which forms of the GSTM1, GSTP1 and other similar genes they had.

Over the next few months, researchers twice gave each participant two treatments: nose spray containing either a dose of ragweed allergen and diesel exhaust particles or spray containing ragweed allergen and a placebo. The amount of diesel particles given was about what someone would experience during 40 hours spent in Southern California.

After administering the spray, researchers measured participants' nasal allergic episodes. They found that participants who lacked the GSTM1

[1] *Frank D. Gilliland, Yu-Fen Li, Andrew Saxon and David Diaz-Sanchez, "Effect of glutathione-transferase m1 and p1 genotypes on xenobiotic enhancement of allergic responses," Lancet. Vol. 363, No. 9403.*

enzyme had a larger allergic response than others. Also, those participants who lacked GSTM1 and had at least one GSTP1 ile105 genetic variant had an even larger allergic response to diesel exhaust particles than did the participants with the other versions of the genes. Researchers estimate that 15 to 20 percent of the population has both genetic variations. This represents a large group especially susceptible to the adverse effects of air pollution.

65. Preliminary U.N. Figures Show 2003 To Be Third Warmest Year on Record

The United Nation's World Meteorological Organization (WMO) said Dec. 16 that 2003 is expected to be the third warmest year on record. According to a preliminary estimate based on figures collected from WMO members through the end of November, the average global surface temperature for the previous year is expected to be 0.45 degrees Celsius above the 1961-1990 annual average, making 2003 the third warmest year after 1998 (0.55 degrees C above the 1961-1990 average) and 2002 (0.48 degrees C above average) based on records dating back to 1861.

Final figures are due to be issued by the U.N. agency in early March.

The WMO noted that last year was marked by an unprecedented heat wave in Europe with seasonal temperatures the warmest on record in France, Germany, Spain, and Switzerland. Average summer temperatures across parts of Europe were consistently 5 degrees C warmer than average, with the heat resulting in an estimated 21,000 additional deaths throughout Europe. The average estimated temperature in the northern hemisphere for 2003 was 0.57 degrees C above the average compared to 0.33 degree C in the southern hemisphere.

WMO Secretary-General G.O.P. Obasi declared Dec. 12 that the continued rise in global average surface temperatures, the increasing concentration of greenhouse gases in the atmosphere, and a growing number of extreme weather and climate events all highlighted the urgent need for governments to achieve the objectives set out under the U.N. Framework Convention on Climate Change.

66. Soot a Major Factor in Global Warming says Leading NASA Scientists

Soot from fossil fuels and other combustion sources may be responsible for one-quarter of the global warming from human activities, according to leading climate scientists with the National Aeronautics and Space Administration. In a paper published the week of Dec. 22 in the Proceedings of the National Academy of Science, James Hansen and Larissa Nazarenko--both of NASA's Goddard Institute for Space Studies and Columbia University's Earth Institute--said soot contributes to global warming when it is deposited on snow, reducing its "albedo," or ability to reflect sunlight back into space. Instead, where it is present, soot absorbs sunlight as heat.

"We suggest that soot contributes to near worldwide melting of ice that is usually attributed solely to global warming," Hansen and Nazarenko said in the study, titled *Soot Climate Forcing via Snow and Ice Albedos.* [2]

[2] James Hansen and Larissa Nazarenko, National Aeronautics and Space Administration Goddard Institute for Space Studies and Columbia University Earth

A single snowflake may contain thousands of aerosols, including soot, the paper said, and soot may be twice as effective as carbon dioxide in forcing global warming. Fossil fuels and biomass burning each contribute about half of global atmospheric soot, the paper said. Soot emissions from coal-burning are decreasing in many developed countries due to the increased use of scrubbers. The largest source of soot in developed countries is diesel-fuel, the paper said. Biofuels are a major source in developing countries. Much cleaner diesel and biofuel technology are possible, the paper said.

However, the substantial role in climate change inferred for soot does not alter the role of greenhouse gases, like carbon dioxide, as the primary cause of global warming, the paper said. Soot magnifies the effect of carbon dioxide, though, the paper said, by contributing to warming of the atmosphere and by lowering the temperature at which carbon dioxide's effects occur. For example, soot deposition increases surface melt on ice masses, raising sea levels. Meltwater increases global warming more because it has a lower albedo than snow.

Measurements of Arctic ice suggest a thinning by about a meter between 1958 and 1997, the paper said. Furthermore, spring snow melt in Siberia, Alaska, Canada, and Scandinavia has come two to five weeks earlier in recent decades.

Hansen and Nazarenko suggest that an increase of 1 degree Celsius in global temperatures from current levels would be enough to initiate coastal inundation worldwide. Reducing soot deposition and restoring snow albedo to high values would make a major contribution to preventing this, they said.

Institute, 2880 Broadway, New York, NY 10025

67. Fuel Cells Not Yet The Answer, Manufacturer Says

The producer of fuel cells that can recharge mobile phones and portable music players told industrialists and policymakers last week not to count on the power packs to solve the energy crisis. "Don't hold your breath on fuel cells. Every 10 years they say commercial deployment is only 10 years away. We're still not seeing any real fuel cells that can run, say, a car," said Robert Lifton, chief executive of Medis Technologies.

He was participating in several discussions on energy at the World Economic Forum, an annual huddle of government officials, corporate executives and special interest groups.

Medis itself will not provide the solution either, because its Power Pack fuel cell will only power small portable devices, and cannot be used for bigger items such as computers or cars. "Our product doesn't scale," Lifton said, adding that the company's first working prototypes would be introduced in May. The company plans to put a $29.99 price tag on its fuel cell for portable consumer electronics, such as handsets, MP3 players and digital cameras. Each cartridge of fuel, which will power a cell phone for some 12 hours, will be priced at $1.50.

Its fuel cell should be among the very first commercial applications of an electrochemical process that was first discovered in the nineteenth century. A fuel cell converts the chemical energy of a fuel and oxidant to electrical energy.

In the United States, fuel cells, and the

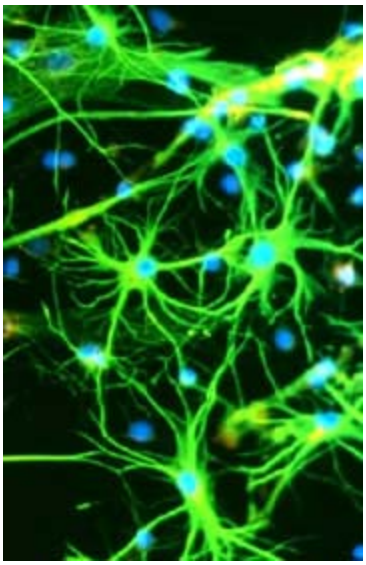
hydrogen that is used in many models as a fuel, is seen as a solution to keep engines running, even when the world runs out of fossil fuels later this century. President Bush supported a $1.3 billion research program to develop such fuel cells.

Many Japanese companies are also working on fuel cells, with Toshiba claiming a prototype that powers a laptop. NEC has boasted about a record level of milliwatts it can generate per square centimeter of reaction surface. Franco-Italian chip maker STMicroelectronics is using chip-making technology to increase energy generation.

Fuel cells only produce electricity, water, and in some cases heat. But Lifton said hydrogen fuel cells still had to overcome essential problems, such as excess heat and water generation.

Governments should focus on energy preservation, and not hope that fuel cell technology will catch up with energy needs. He and others also pointed out that fuel cells could only be a solution to the upcoming energy crisis if the fuel, such as hydrogen, is generated with renewable energy sources. Hydrogen can either be generated by wind or solar energy, or by using fossil fuels such as gas.

68. Nanoparticles In The Brain



Nanoparticles - tiny lumps of matter that could one day to be used to build faster computer circuits and improve drug delivery systems - can travel to the brain after being inhaled, according to researchers from the United States.

The finding sounds a cautionary note for advocates of nanotechnology, but may also lead to a fuller understanding of the health effects of the nanosized particles produced by diesel engines.

Günter Oberdörster of the University of Rochester in New York and colleagues tracked the progress of carbon particles that were only 35 nanometres in diameter and had been inhaled by rats. In the olfactory bulb - an area of the brain that deals with smell - nanoparticles were detected a day after inhalation, and levels continued to rise until the experiment ended after seven days.[3]

"These are the first data to show this," says Ken Donaldson, a toxicologist at the University of Edinburgh, UK. "I

[3] Oberdörster, G. *et al*. Translocation of inhaled ultrafine particles to the brain. *Inhalation Toxicology*, (in press, 2004).

would never have thought of looking for inhaled nanoparticles in the brain."

Substances such as drugs can cross from the brain into the blood, but Oberdörster believes that the carbon nanoparticles enter the brain by moving down the brain cells that pick up odors and transmit signals to the olfactory bulb. He says that unpublished work, in which his group blocked one of the rats' nostrils and tracked which side of the brain the nanoparticles reached, appears to confirm this.

Little is known about what effect nanoparticles will have when they reach the brain. The toxicity of the nanoparticles that are currently being used to build prototype nanosized electronic circuits - such as carbon nanotubes, which are produced in labs around the world - has not been thoroughly assessed.

But Donaldson says that there is a growing feeling that other nanoparticles, such as those produced by diesel exhausts, may be damaging to some parts of our body. He estimates that people in cities take in about 25 million nanoparticles with every breath. These particles are believed to increase respiratory and cardiac problems, probably by triggering an inflammatory reaction in the lungs.

Oberdörster's unpublished work includes evidence that some nanoparticles may trigger a similar inflammatory reaction in the brains of rats.