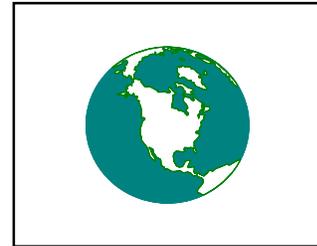


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# CAR LINES

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## EUROPE

### 1. Finnish Study Links Pollution With Heart Disease

Air pollution worsens heart disease by cutting off circulation to the heart, Finnish researchers reported this week in a study that helps explain why polluted environments aggravate not only asthma but heart conditions. Dr. Juha Pekkanen of the National Public Health Institute in Kuopio, Finland, and colleagues looked specifically at pollution coming from factory smokestacks and the tailpipes of some diesel-powered buses and trucks. Heart disease patients exposed to such pollution were about three times more likely to have ischemia - decreased blood flow to the heart - while exercising after being exposed to such pollution, as compared with when they exercised after breathing in cleaner air, they reported.

Writing in *Circulation*, published by the American Heart Association, the researchers said they could measure clear changes in oxygen supply to the heart using electrocardiograms (ECG). They studied 45 heart disease patients, nearly half of them women, all living within an area in Helsinki where air pollution could be easily measured. Twice a week for six weeks the researchers gave the volunteers an exercise test, and charted their findings against readings of extremely fine particles in the air locally. Two days after breathing in polluted air, the volunteers had "significantly elevated" levels of ischemia, Pekkanen and colleagues wrote.

Ischemia is often painless, but is a sign of serious heart disease. The pollution may either be helping clumps of artery-clogging plaque break off - causing heart attacks and strokes - or it could be

causing dangerous heart rhythms, or both, the researchers said.

Heart rate also increased after exposure to pollution - from an average of 61 beats per minute to 90.

The study helps explain why pollution can affect heart disease, Dr. Murray Mittleman, director of cardiovascular epidemiology at Harvard University and Beth Israel Deaconess Medical Center in Boston, and colleagues said in a commentary. Mittleman and colleagues cited studies that showed health risks from particle-containing air pollution were notable not only in the expected cities, such as Los Angeles and Houston, but in "cities that are considered to have relatively clean air, such as Boston, Seattle and Minneapolis."

Researchers reported in *Circulation* earlier this year that fine particles, when inhaled, can stay in the system for hours, traveling in the blood to various organs. Those particles can disrupt the heart's activity, interfering with its rhythm and tightening arteries.

### 2. Germany Nearing GHG Reduction Goal

Germany is very close to fulfilling its obligation under the Kyoto Protocol to reduce greenhouse gas emissions by 21 percent, according to its third national communication published July 31 under the United Nations Framework Convention on Climate Change. Total reductions of the six greenhouse gases named in the protocol reached 19.1 percent in 2000, according to preliminary data quoted by the report. "Germany has underscored its leading position in international climate change prevention," Environment Minister Juergen Trittin said in a news release. "Even in fields that have been causing

us worries for years--emissions from traffic and private households--our efforts are showing results," he said. Since 1999, carbon dioxide emissions from traffic have been reduced by 2 percent a year; emissions from households are down 11 percent in comparison to 1990, he said.

The report shows, however, that reductions are not equal for all six greenhouse gases covered by the Kyoto agreement. While reductions have been disproportionate for methane (36.2 percent below 1990 standards) and nitrous oxide (27.6 percent), they stagnated at 15.3 percent for carbon dioxide emissions in 1999 and 2000, according to the report. Emissions of some gases, particularly of hydrofluorocarbons, rose sharply, it said.

In the Kyoto Protocol, industrial nations promised to reduce emissions of six greenhouse gases to 5.2 percent below 1990 levels by 2012. In a separate agreement within the European Union, the so-called EU bubble, Germany said it would reduce its emissions by 21 percent.

### **3. Green Power To Start For London's Red Buses In 2003**

Transport for London (TFL), the newly-created body responsible for transport issues in the British capital, will take delivery next year of three zero-emission buses powered by hydrogen fuel cells, in a two-year pilot project. At least one of the buses is expected to run on a central London route to determine how they work in the middle of the city and so Londoners can actually get a look at these buses. The three 70-seater buses to be supplied by EvoBus UK, part of DaimlerChrysler, will arrive in early 2003 for everyday use, decked out in the familiar red of London's double-

decker buses.

The project has the backing of the European Commission, which in December last year awarded a grant of 18.5 million euros (\$18.3 million) to the nine cities involved in the pilot: London, Madrid, Barcelona, Amsterdam, Hamburg and Stuttgart in Germany, Porto in Portugal, Stockholm and Luxembourg.

Some of the key issues of fuel cell transport will be addressed during the London pilot scheme, such as storage space for hydrogen fuel, fuel efficiency and customer satisfaction.

### **4. Norway Scraps Experiment To Dump Carbon Dioxide At Sea**

Norway bowed to protests by environmentalists and denied permission for a controversial experiment to dump tons of liquid carbon dioxide (CO<sub>2</sub>) into the ocean off its shores. Environmentalists fear that high concentrations of carbon dioxide would harm marine life.

Norway said it had studied the environmental and legal implications of an application by a consortium of research institutions to dump 5.4 tons of CO<sub>2</sub> in the ocean. "The possible future use of the sea as storage for CO<sub>2</sub> is controversial," Environment Minister Boerge Brende said in a statement. "Such a deposit could be in defiance of international marine laws and the ministry therefore had to reject the application," he said.

The project is funded by research institutions from Norway, the United States, Canada, Australia and Japan, and was scheduled to start this summer.

### **5. Norway Needs Further Cuts to Meet Emission Reduction**

### **Obligations; Develops Initial Plan**

Without implementing new policies to curb current pollution trends, Norway's greenhouse gas emissions will increase 22 percent by 2010, based on 1990 levels, according to a government report released July 12. Yet under the Kyoto Protocol, Norwegian emissions of the six gases included in the accord are allowed to increase only 1 percent by 2012, based on 1990 levels.

The July report, titled "Third National Communication under the Framework Convention on Climate Change," predicts emissions from oil and gas exploration activities will increase 65 percent, manufacturing emissions by 38 percent and transportation by more than 20 percent.

Parliament approved a government framework strategy June 18 to help reverse those trends. A key part of its strategy is a national emissions trading scheme expected to go into force Jan. 1, 2005, which for the first time will regulate emissions from the country's process industries.

A government white paper due in the autumn will articulate how the trading scheme will work and contain other details of how, in practice, the government will meet its Kyoto obligations. One variable affecting future emissions levels is whether three gas-fired power plants, which could increase CO2 emissions by as much as 2 percent annually, will be constructed, the report said. On a related matter, the report says the government will not issue any permits to allow the construction of new coal-fired facilities until 2012 at the earliest in its effort to curb greenhouse gas emissions.

The government has already launched an energy efficiency project in Shanxi,

China, and a forest conservation and replanting project in Costa Rica, actions that could earn emission credits for Norway, the report says.

Norway's Parliament will begin structuring a new tax on hydrofluorocarbons and perfluorocarbons in the autumn, which will be enacted as part of the 2003 national budget. A voluntary agreement with industry reached March 19, will require Norwegian industry to reduce emissions 13 percent by 2005, and 30 percent by 2010, based on 2000 annual emissions levels. The agreement, which contains a gas recovery component, is between the government and three industrial associations whose members use and produce the gas, such as producers of electronic devices. Customers of products using the gas, such as utility firms, are also subject to the agreement.

There are no penalties for noncompliance with the voluntary accord. But if the agreement is not honored, it will be voided and a binding regulation will be put in place.

The Norwegian government has successfully concluded voluntary agreements related to packaging and aluminum-industry emissions, and it has begun but not yet concluded additional voluntary accords regarding volatile organic compounds and emissions from offshore petroleum facilities.

### **6. World Heading For Warmest Year Yet According To UK Met Office**

The first six months of the year have been the second warmest ever and average global temperatures in 2002 could be the highest ever recorded, British weather experts have announced. The Met Office said global temperatures were 0.57 degrees

Celsius (1.03 Fahrenheit) higher than the long term average of about 15 degrees (59F) in the period from January to June. In the nearly 150 years since recording began, only in 1998 has the difference been higher, 0.6 degrees (1.08F), and that was caused by the influence of the El Nino weather phenomenon. The figures also showed that the northern hemisphere had enjoyed its warmest ever half year, with temperatures 0.73 degrees (1.31F) above the long term average.

The Met Office compiles its figures from data collected from observatories round the world, as well as from ships at sea.

### **7. New Dutch Government Lowering Priority of Environmental Issues**

The new Dutch coalition government plans to make environmental issues a lower priority by emphasizing deregulation, voluntary agreements, and cost-saving measures. A coalition agreement submitted to the Dutch Parliament shows that it intends to end environmental subsidies, including tax exemptions for environment-friendly "green" energy.

Another significant change included in the agreement is that a secretary of state rather than a minister will manage the environment portfolio. Giving the environmental portfolio to a secretary of state rather than to a minister indicates that environmental policy's influence and status have been reduced.

According to the coalition agreement, the new government aims to carry out the obligations resulting from the 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change in a cost-effective manner. For that reason, carbon dioxide emissions trading has to be stimulated, the agreement said. Under the Kyoto

Protocol, the Netherlands is required to reduce its greenhouse gas emissions 6 percent by 2008-2012, based on 1990 levels.

In addition, the new Cabinet is considering postponing the shutdown of Borssele, the only operational nuclear plant in the Netherlands, because of the low carbon dioxide emissions released by nuclear plants. The previous government had planned to shut down Borssele by 2002.

The new government also intends to lift the tax exemption on green energy. Currently, consumers do not have to pay tax on green energy--electricity that is generated by wind, sun, or biomass. Under the tax exemption, the price that customers pay for sustainable electricity is the same as the price paid for regular electricity (energy from fossil fuels and nuclear power). The production of regular electricity is less expensive than it is for green electricity. However, because of the "eco-tax" levied on it, regular electricity costs as much as green energy. The regulation was established to stimulate new green electricity initiatives within the Netherlands. Half of the green energy, however, is imported from abroad and generated in old plants. This is the reason the new government is considering lifting the exemption.

The coalition agreement emphasizes easing traffic congestion rather than reducing air and noise pollution. In order to stimulate a freer circulation of traffic, the new cabinet intends to submit an emergency law on broadening freeways. Emergency laws circumvent the regular legislative process, avoiding years of procedures and thus allowing extra asphalt to be laid more quickly. A mobility measure of the previous Cabinet, a plan to introduce a variable-priced road tax system, has been shelved. According to the coalition

agreement, the accessibility of roads and the quality of public transport must be improved first.

#### **8. Tax Break, Financial Incentives Encouraging Italians to Purchase More Fuel-Efficient Cars**

A series of automobile-related financial incentives serve to make it less attractive for car owners to use larger and less efficient vehicles, experts say, further strengthening the effects of a month-old tax break for buyers of small environmentally friendly autos. The measures include a 3.01 percent rise in taxes on gasoline over the last year, an increase of 2.54 percent in insurance costs over the same period, a 4.55 percent increase in average repair costs, and a 3.99 percent increase in toll costs. All of those areas saw prices rise by more than Italy's 2.12 percent inflation rate over the same period.

According to the polling and consulting firm Opinioni, the increases will cost an average driver who drives a mid-sized car an average of 250 kilometers (around 155 miles) per week an average of \$433 in extra costs per year. In the case of fuel-efficient cars bought under the government's recent tax break package, the costs will be lower because they use less fuel, and the remaining increases will be balanced by the suspension of a special regional car tax that will save the average qualified car owner \$510 per year.

#### **9. Greek Government Announces Plan To Reduce Air Pollution in Athens**

The Greek government plans to implement a [euro]280 million (\$277 million) program aimed at reducing atmospheric pollution in Athens by lowering the amount of airborne

particles and benzene, Environment Minister and Public Works Minister Vasso Papandreou has announced. Papandreou said the set of measures, which includes lower emission limits for industries, the systematic monitoring of these levels, and financial incentives for homeowners to replace old central heating furnaces, is expected to lower pollution levels by 12.5 percent.

Other measures of the plan, which is expected to be implemented by 2005, include financial incentives for taxi drivers to convert their engines to operate with LPG and a pilot program to introduce alternative fuel vehicles into the state sector.

On July 8, the European Commission said it was taking Greece to the European Court of Justice for its failure to comply with European Directive 99/13/EC on the Limitation of Emissions of Volatile Organic Compounds due to the Use of Organic Solvents in Certain Activities and Installations. Papandreou said the government was in the process of incorporating the directive into national legislation and to begin implementing it.

Vehicle traffic is responsible for about 80 percent of Athens' atmospheric pollution, followed by central heating and industry. Around 45 percent of Greece's 3.4 million automobiles circulate in Athens. Solutions are hindered by the mountains surrounding Athens which trap air masses over the city; the frequent temperature extremes; the long periods of sunshine that favor the formation of secondary pollutants, such as ozone; and the city's economic and demographic development.

#### **10. New European Studies Show That Improving Air Quality Can Save Lives**

Improving air quality by reducing pollution caused by traffic congestion and smog can save lives, scientists said in two new studies published in the British medical journal, *The Lancet*.

One study<sup>1</sup> found that since Irish officials in Dublin banned the sale of coal in 1990, deaths from the lung and heart diseases have dropped. "We estimated that there were about 243 fewer cardiovascular deaths and 116 fewer respiratory deaths per year in Dublin after the ban on coal sales," said Professor Luke Clancy, of St James' Hospital in Dublin. "These changes were seen immediately in the winter after introduction of the ban," he added in the report. Clancy and his team examined the impact on death rates in the Irish capital in the six years before and after the ban was introduced. It resulted in a 15 percent drop in deaths from respiratory diseases and a 10 percent slide in cardiovascular deaths. It is especially interesting that effect estimates extrapolated from this study are substantially larger than those obtained from daily time-series mortality studies and approach effect estimates from the long-term studies -- suggesting that the short-term time-series or episodic studies do not adequately capture the long-term cumulative effects of pollution exposure.

In a separate study in the magazine<sup>2</sup>,

<sup>1</sup> "Effect of air-pollution control on death rates in Dublin, Ireland: an intervention study", **St James' Hospital, Dublin, Ireland** (Prof L Clancy MD); **Physics Department, Dublin Institute of Technology, Dublin** (P Goodman PhD); **Trinity College, Dublin** (H Sinclair PhD); and **Environmental Epidemiology Program, Harvard School of Public Health, Boston, MA 02115, USA** (Prof D W Dockery ScD), *Lancet*, Volume 360, Number 9341 19 October 2002

<sup>2</sup> "Association between mortality and indicators of traffic-related air pollution in the Netherlands: a cohort study", Institute for

Dutch scientists showed that people exposed to traffic fumes over a long period of time may have a shorter life expectancy than other people. Elderly residents who lived near a main road where concentrations of air pollutants were high were around twice as likely to die from heart and lung disease than people living further away, according to the research conducted by Dr Gerard Hoek of Utrecht University. These results suggest that assessment of particulate exposure using only community average-background concentrations underestimates the health burden attributable to elevated concentrations in the vicinity of sources. In fact, the relative risk for 10 µg/m<sup>3</sup> black smoke nearly doubled (1.71, 95% CI 1.10-2.67) when local sources of black smoke in addition to background concentrations were modeled.

"These studies, on top of what has been known earlier, provide sufficient evidence to implement measures to reduce (pollution causing) particles from all sources emitting them," said Dr Annette Peters, of the National Research Centre for Environment and Health. In a commentary in the journal she added that both coal burning and traffic emissions are major sources of pollution worldwide.<sup>3</sup>

Risk Assessment Sciences, Environmental and Occupational Health group, Utrecht University, Utrecht, Netherlands (G Hoek PhD, B Brunekreef PhD); Department of Nutritional Epidemiology, Netherlands Organization for Applied Scientific Research, Nutrition and Food Research, Zeist (S Goldbohm PhD); Laboratory of Exposure Assessment and Environmental Epidemiology, National Institute of Public Health and the Environment, Bilthoven (P Fischer MSc); and Department of Epidemiology, Maastricht University, Maastricht, Netherlands (P A van den Brandt PhD), *Lancet*, Volume 360, Number 9341 19 October 2002

<sup>3</sup> "**Cardiopulmonary mortality and air**

### 11. Swiss Government Proposes Tax On Gasoline, Diesel Fuels Containing Sulfur

The Swiss government has sent a proposal to the Parliament for a new tax on gasoline and diesel fuel containing sulfur levels of more than 10 parts per million. Under the proposal forwarded to the Swiss parliament Sept. 20, the new tax would be fixed at between 2-4 Swiss centimes per liter of gasoline (\$0.05-\$0.10 per gallon) and between 4-5 centimes (\$0.10-\$0.13 per gallon) for diesel fuel with sulfur content above 10 ppm. Fuel with sulfur content below 10 ppm would be considered desulfurized fuel and be exempt from the tax. The new tax would enter into force on Jan. 1, 2004.

Under current Swiss regulations, gasoline can have a sulfur content of up to 150 ppm, while the maximum level for diesel fuel is fixed at 350 ppm, the same as the EU. These norms, however, are due to drop to 50 ppm for both types of fuel when a new Swiss ordinance on air pollution enters into force from 2005, bringing Switzerland in line with new European Union norms.

Switzerland's Federal Department for Environment, Transportation, Energy, and Communication said promoting the use of desulfurized fuel was necessary to achieve further cuts in emissions of carbon dioxide, nitrogen oxides, hydrocarbons, and particulates. The tax also would help reduce fuel consumption in the new generation of vehicle engines.

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**pollution**", A. Peters, GSF National Research Centre for Environment and Health, Institute of Epidemiology, 85758 Neuherberg, Germany; and A Pope, Brigham Young University, Provo, UT, USA

### 12. European Parliament Acts on Fuels, Fuel Economy and Pleasure Craft

#### A. Sulfur-Free Gasoline and Diesel by 2009

On September 26, the European Parliament voted to approve a legislative compromise with EU governments on the timing of a mandatory introduction of sulfur-free gasoline and diesel fuel. If the EU Council of Ministers agrees, the EU will set a limit of 10 parts per million on the sulfur content of road vehicle fuels EU-wide from Jan. 1, 2009. But if ministers resist other demands from the Parliament, the two sides will have to settle the issue through formal negotiations.

The Parliament and the EU Council of Ministers have already agreed that states have to begin marketing the "zero-sulfur" fuels by Jan. 1, 2005. Distribution has to be on "a balanced geographical basis" that allows motorists access to clean fuels within reasonable traveling distance. As of Jan. 1, 2009, sulfur-free fuel would have to be available throughout the EU so that the fuel achieves "full penetration" of the marketplace, under the draft taken up by Parliament.

The EU Commission said lower sulfur levels would improve air quality, reduce acidification, and facilitate new engine technologies required to meet the EU's goal of reducing carbon dioxide emissions from new cars to an average of 140 grams per kilogram by 2008.

In a first reading on Nov. 29, 2001, the Parliament said it wanted the deadline be advanced three years to Jan. 1,

2008. In determining their own position on the draft, EU ministers suggested Jan. 1, 2009--the compromise now accepted by the Parliament. The Parliament insisted however that, for diesel oil, the 2009 deadline should be subject to review by the end of 2005, with a view to postponement in the event of supply problems.

However, the Parliament also introduced tight requirements on the sulfur content of fuels for farm and forestry tractors, construction plants, and other "non-road mobile machinery." Opponents protested that the additional refining costs would be passed on to an agriculture sector already in economic difficulties. To address these concerns, the Parliament introduced an amendment confirming that states are free to give cleaner fuels favorable tax treatment--as several do already on low-sulfur fuels currently produced to meet the first round of Auto-Oil fuel quality standards.

**B. Plan On CO2 Emissions, Fuel Consumption**

Legislation approved by the European Parliament Sept. 24 will establish European Union rules for measuring carbon dioxide emissions and fuel consumption performance of vans and other light commercial vehicles. In recommending approval of proposals from the European Commission, the Parliament's Environment Committee listed benefits of comparable data. Author of a committee report appraising the draft, British Deputy Robert Goodwill said the data would facilitate "eco-labeling" schemes that allow purchasers to identify the most fuel-efficient vehicles--"an important consideration in Europe, where fuel is very highly taxed."

The data would also help in monitoring and target setting in Europe's attempts to reduce CO2 emissions, Goodwill said.

Goodwill saw no need for further EU intervention; pressure for improvements, he said, could be left to "this intensively competitive and operating cost-conscious market." He added that many of the vehicles covered by the proposed rules share the engines and other technical features of automobiles covered by a voluntary EU agreement with industry aimed at reducing CO2 emissions to 140 grams per kilometer by 2008.

Ministers representing the 15 EU state governments will now scrutinize the draft in light of technical amendments introduced by the Parliament. If they accept the text, ministers will be able to sign the measure into law. Governments will then have until April 30, 2003, to transpose the rules into national law. By 2007, the test rules will be applied in type certification across the range of vehicles covered.

**C. Air, Noise Limits for Pleasure Boats**

On September 26<sup>th</sup>, the European Parliament approved a measure that would set limits on exhaust and noise emissions from pleasure boats. It sets a range of limits on emissions of carbon monoxide, hydrocarbons, nitrogen oxides, and particulates according to engine size and type. Sound emission limits ranging between 67 decibels to 75 dB will also be dictated by engine type.

Austria and Germany also have adopted national rules, in collaboration with Switzerland, which is not a member of the EU, in order to control pollution on lakes and rivers at their frontiers.

Swedish legislation has been on hold since 1996, pending adoption of EU-wide standards.

Officials from the European Commission and the U.S. administration under the auspices of the Transatlantic Business Dialogue on Alignment of Product Standards have discussed the draft. Enactment will be immediate if EU ministers go along with amendments introduced by the Parliament. The changes seek to keep the legislation focused on industrial series production of boats and marine engines, rather than on production of customized boats for individual purchasers and owner-built craft, particularly in the case of noise emissions. The Parliament also wants a guaranteed say on future revisions to the emission standards.

EU states will have to transpose the directive's requirements into national law by June 30, 2003. Starting Jan. 1, 2004, the legislation will apply to more than 3 million craft sold annually in Europe.

British Deputy Martin Callanan, spokesman for the Parliament's Environment Committee, explained that the legislation adds environmental requirements to the 1994 directive, primarily a product standard measure, which came into force in 1998. Callanan angered German members of the committee by speaking against some of the amendments he was supposed to be presenting to the plenary on behalf of the committee.

The amendments reflected concerns, in particular, about boating-related pollution at Lake Constance, a source of drinking water for several million consumers in Austria, Germany, and Switzerland.

### **13. EU Indicates Accession Likely For 10 Countries by 2004**

The European Commission issued its annual progress reports this week on 13 candidate states, saying 10 -- Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia -- would be ready to join the EU in 2004. The EU's executive set a target date of 2007 for Bulgaria and Romania but it did not say when Turkey, the 13th candidate, might begin accession talks.

The Commission made many recommendations to the candidates, most of which are poor former communist states with much work still to do on administrative and judicial reform.

### **14. Russian Cabinet Planning to Issue Resolution Tightening Car Emissions**

The Russian government has reportedly said it is working on a resolution to ban by mid-2004 sales of cars that don't meet Euro 2 standards at minimum. Both the deputy head of the Ministry of Natural Resources, Maksim Yakovenko, and Minister of Industry, Science, and Technology Ilya Klebanov announced the Cabinet's plan to sign such a resolution early in September. The main goal of the resolution is apparently to force the Russian automobile industry to start producing cars with lower emissions and ramping up over time to meet EU standards.

The resolution will require Russian automakers to manufacture cars at least meeting Euro-2 emission standards by July 1, 2004.

"We are currently behind the EU [European Union] by five to six years, and we will have to overcome this difference by January 2008, when the

Russian government will pass a ban on the sale of all vehicles with engines lower than Euro-4 norms," Klebanov told journalists during a news conference in Kazan.

Russia is seeking greater integration with the EU. Russia also is interested in exporting its automobiles; if those cars continue to pollute heavily, there will be no market for them.

### **15. Russian Prime Minister Approves Framework Environmental Policy Doctrine**

Russian Prime Minister Mikhail Kasiyanov approved and signed a framework Ecological Doctrine to be used to develop the country's environmental policies through the end of the decade, the government announced Sept. 6. Kasiyanov signed the document Sept. 3, less than two weeks after the Russian Cabinet gave its approval to the Ecological Doctrine (No. 1225-R), which was presented to it by the Ministry of Natural Resources. The doctrine took effect with Kasiyanov's signature, and it is slated to be published eventually in the official Rossiiskaya Gazeta.

The Cabinet instructed the Ministry of Natural Resources to prepare a specific plan for implementing the doctrine by Nov. 15, 2002. By that date, experts will have to prepare drafts of federal and regional laws, regulations, and bills in the field of environmental protection. Once approved by the Cabinet, all of these laws will serve as a legislative, administrative, and social framework for the implementation of the Ecological Doctrine.

Maksim Yakovenko, deputy head of the Ministry of Natural Resources (MNR) and head of the State Service for the Environmental Protection at the MNR,

presented the Ecological Doctrine to the Cabinet on Aug. 27. It appears that the timing of the approval of the doctrine was due mainly to the Aug. 26-Sept. 4 World Summit on Sustainable Development in Johannesburg.

The text of the doctrine itself mentions the need to act on Agenda 21, the blueprint for balancing economic growth with environmental protection that was approved at the 1992 United Nations Earth Summit in Rio de Janeiro. The doctrine outlines three major policy objectives:

- Protection and revitalization of the environment;
- Stable use of nature; and
- Cutting down on pollution and preserving natural resources.

### **16. Euro Commission Plans to Reduce Car Fees To End Double Tax, Help Reduce Emissions**

The European Commission outlined on September 9th a new strategy to revamp the terms of car registration fees in the 15 European Union member states in order to remove double taxation and to help reduce carbon dioxide emissions from road transport. The strategy, which comes in the form of a communication, calls for the gradual reduction and eventual abolition of current member state car registration taxes. The strategy would replace them with annual road taxes and fuel taxes, which would be based on usage.

The Commission said the new proposal would help meet current demands by the European Parliament to improve the terms of a voluntary agreement the EU has with European, American, and Asian automobile manufacturers to reduce the amount of carbon dioxide emissions to 140 grams per kilometer by 2010. Road transport has been singled

out by the European Environment Agency as the single biggest growing source of CO2 emissions in the EU.

EU member states' taxes on passenger cars vary both in their structure and their level, the Commission said. These include taxes payable at the time of acquisition of the car (registration tax), a periodic tax payable in connection with the ownership of the passenger car (also known as an annual road tax), taxes on fuels, and other taxes such as value added taxes, insurance taxes, registration, and road tolls.

The Commission strategy and recommendations come in the form of a communication. It will be submitted to the Council of Economic and Finance Ministers. Based on the reception it receives among the member states, the Commission will put forward specific legislative proposals.

#### **17. Finnish Officials Concerned About Impact Of Order to Revise Tax on Imported Used Cars**

A Finnish government proposal to change the tax on imported used passenger vehicles will likely lead to increased pollution in Finland. The expected increased emissions are due to the abolition of a used-car import fee the European Union's Court of Justice said violates EU legislation. Without the import fee, Finnish officials said they expect the number of imported old and polluting cars to increase significantly.

Finnish Finance Minister Sauli Niinistö told reporters Sept. 25 his government would comply with the court ruling by changing Finnish tax codes.

The European court's Sept. 19 decision held Finland's current vehicle tax code (1482/1994) violates EU law because the purchasers of used cars bought

within the EU and then shipped to Finland are taxed at a higher rate than purchasers of used autos already registered in Finland. In arguments before the court, the European Commission labeled that part of the Finnish tax code "discriminatory."

Speaking with reporters Sept. 19--the day the court announced its decision--Minister Niinistö said his government would draw up a new law that would charge a single fee for both used and new cars imported into Finland.

#### **18. Italian Lawmakers Consider Measure Aimed at Removing Old Cars From Roads**

In an initiative that lawmakers say is aimed at eliminating most of the highest polluting cars from Italian roads, Parliament is set to debate a bill that would make most cars more than 10 years old illegal. But environmentalists are criticizing the idea as a way to help struggling Italian automaker Fiat SpA and say that it could have a negative net environmental impact, as tens of thousands of old Italian cars could end up being sold in Eastern Europe and North Africa.

The government has not yet said whether it supports or opposes the measures, but it is sponsored by a group of lawmakers who are part of the ruling coalition, which could indicate support. If the government does officially state its support for the bill, it will almost surely pass with no problem, because it has such a large majority in the Parliament.

The plan, before Parliament's lower house, would deny a license plate to vehicles when the previous tag expires more than 10 years after the car was manufactured. The measure is being billed as a way to remove vehicles not

equipped with catalytic converters or with other characteristics that make them less efficient.

Under the proposed law, cars that have value as collectables are exempted from the rules, though they would be required to pay extra fees when renewing their license plates.

Despite the possibility of lower emissions levels as a result of the measure, critics said that the proposal is an attempt to help struggling car maker Fiat, which has in recent weeks announced widespread layoffs as its market share within Italy erodes and the company enters into its second consecutive year of widespread financial losses.

Italian environmentalists have raised concerns that the proposal could also prompt used car dealers and individuals to sell vehicles more than 10 years old to markets in Eastern Europe and North Africa, where environmental standards are less strict.

## NORTH AMERICA

### **19. Court Denies Caterpillar, DDC Petitions To Relax Consent Decrees**

Detroit Diesel Corporation ("DDC") and Caterpillar, Inc. ("Caterpillar"), manufacturers of heavy-duty diesel engines, petitioned the United States District Court For The District Of Columbia, seeking review and modification of the consent decree entered by this court three years ago to settle claims brought against them by the Environmental Protection Agency ("EPA"). In the enforcement actions DDC and Caterpillar are each subject to its own consent decree and filed separate motions for review and modification. The background of the

underlying dispute is the same for both defendants and both defendants assert increased cost as one of the bases for their motions. EPA claimed that defendants and other engine manufacturers violated the Clean Air Act by selling engines that emitted excess pollution and by failing to disclose how the engines operated in real world conditions. A key component of the decree requires defendants to meet by October 1, 2002, engine emissions standards that will not otherwise be applicable until January 2004. Defendants sought a modification that would postpone this "pull ahead requirement" on the grounds that unanticipated cost increases make compliance with the decree substantially more onerous while reducing its benefits to the public. In addition, Caterpillar sought to prevent EPA from applying its recently established non-conformance penalties ("NCPs") for Model Year 2004 to Caterpillar for failure to meet the October 2002 deadline. Caterpillar also challenged EPA's approval of certain emission control strategies developed by other engine manufacturers to comply with the decrees. Upon consideration of the motions, the opposition thereto, and the record of the cases, the court concluded that defendants' motions must be denied.

### **20. ATA Petitions EPA To Reopen 2004 Rule; Court Action To Follow?**

The American Trucking Association (ATA) has petitioned the EPA and President Bush to reopen the 2004 heavy-duty diesel emission rule. The petition is based on an analysis of fleet emission reductions and the cost-effectiveness of the 2004 rule and the 2002 "pull-ahead" provision, "based on new information concerning reliability and maintenance issues, energy impacts, life-cycle costs, and their

impact upon the anticipated emissions reductions."

The ATA argues that the cost-effectiveness for 2004-2006 implementation of the 2004 rule would be \$5,238 (in 2001 dollars) per ton of NO<sub>x</sub>+NMHC reduced. This figure is more than 20 times worse than the \$200 per ton as estimated by the EPA at the time of promulgation of the original rule in 1997. The ATA claims the cost effectiveness of the 2004 rule is disproportionately high compared to EPA's other mobile source regulations, thus warranting the Agency reconsideration. The emission reduction effectiveness of the "pull-ahead" provision is further reduced by the "pre-buy" of pre-October engines by U.S. trucking companies.

The major factor which is causing the difficulty is that the baseline of pre 2004 engines includes engines equipped with defeat devices which have been the subject of the Consent Decree and cleaning up these engines is more costly than cleaning up engines which actually complied with the 1998 standards.

Under the Clean Air Act, the EPA must consider the ATA petition, even though the rulemaking in question has been long finalized. If EPA determines that the ATA's concerns are legitimate, the October 2002 "pull-ahead" provision, which is based on the 2004 emission standards, will be also affected. If EPA denies the petition, which is highly likely, the question is will ATA then take the Agency to court again. It would appear that the stage is being set to do just that.

#### **21. US EPA Releases Health Assessment Document for Diesel Engine Exhaust**

The U.S. Environmental Protection

Agency (EPA) has announced the availability of the final Health Assessment Document for Diesel Engine Exhaust. The document was prepared by the Office of Research and Development's National Center for Environmental Assessment (NCEA). The assessment evaluates the health effects literature to identify the most important exposure hazards to humans. Secondly, the assessment evaluates the exposure-response characteristics of the key health effects so that information is available for understanding the possible impact on an exposed population.

The diesel engine has been a vital workhorse in the United States, powering many of its large trucks, buses, farm, railroad, marine and construction equipment. Expectations are that the use of diesel engines will increase due to the superior performance characteristics of the engine. Diesel engine exhaust, however, contains large quantities of harmful pollutants in a complex mixture of gases and particulates. Human exposure to this exhaust comes from both highway uses (on-road) as well as from the nonroad uses of the diesel engine.

EPA started regulating the gaseous emissions from the heavy-duty highway uses of diesel engines in the 1970s and particles in the 1980s. The reduction of harmful exhaust emissions has taken a large step forward because of standards issued in 2000 which will bring about very large reductions in exhaust emissions for model year 2007 heavy duty engines used in trucks, buses and other on-road uses. EPA anticipates developing similarly stringent regulations for other diesel engine uses, including those used in nonroad applications.

Until these regulations take effect, EPA

is partnering with state and local agencies to retrofit older, dirtier, engines to make them run cleaner and to develop model programs to reduce emissions from idling engines. In addition, EPA and local authorities are working to ensure early introduction of effective technologies for particulate matter control and low sulfur fuel where possible in advance of the 2007 requirements. Today, at least one engine manufacturer is producing new engines with particulate traps that when coupled with low-sulfur fuel meets 2007 particulate emission levels. The Agency expects significant environmental and public health benefits as the environmental performance of diesel engines and diesel fuels improve.

A draft of this assessment, along with the peer review comments of the Clean Air Scientific Advisory Committee, was part of the scientific basis for EPA's regulation of heavy-duty highway engines completed in December 2000. The information provided by this assessment was useful in developing EPA's understanding of the public health implications of exposure to diesel engine exhaust and the public health benefits of taking regulatory action to control diesel emissions.

The health assessment concludes that long-term (i.e., chronic) exposure to diesel exhaust is likely to pose a lung cancer hazard, as well as damage the lung in other ways depending on exposure. The health assessment's conclusions are based on exposure to exhaust from diesel engines built prior to the mid-1990s. Short-term (i.e., acute) exposures can cause transient irritation and inflammatory symptoms, although the nature and extent of these symptoms are highly variable across the population. The assessment also states that evidence is emerging that diesel exhaust exacerbates existing allergies and asthma symptoms. The assessment

recognizes that diesel engine exhaust emissions, as a mixture of many constituents, also contribute to ambient concentrations of several criteria air pollutants including nitrogen oxides, sulfur oxides, fine particles, as well as other hazardous air pollutants.

The particulate fraction of diesel exhaust and its composition is a key element in EPA's present understanding of the health issues and formulation of the conclusions in the health assessment. The amount of exhaust particulate from on-road engines has been decreasing in recent years and is expected to decrease 90% from today's levels with the engines designed to meet the 2007 regulations. The composition of the exhaust particulate matter and the gases also will change. While EPA believes that the assessment's conclusions apply to the general use of diesels today, as cleaner diesel engines replace a substantial number of existing engines, the general applicability of the conclusions in this Health Assessment Document will need to be reevaluated.

## **22. Ford To Discontinue Think Electric Vehicles In US**

Ford Motor Co. announced that it will stop selling Think electric vehicles in the U.S. at the end of the year because of lack of demand. The Dearborn-based automaker said it plans to focus on other technologies for cleaner-running cars and trucks, including hydrogen fuel cells and the gas-electric hybrid SUV Escape, due to debut in late 2003.

Ford began selling electric-only Think City small cars in Europe in 1999 and began offering Think Neighbor low-speed vehicles, which resemble golf carts, in the U.S. last year.

Spectra LLC, which builds the Neighbor for Ford in Detroit, will end production by

the end of the year. Ford will assess in the next three months whether to stop production at the Think Nordic plant near Oslo, which makes the City.

The company has sold 1,600 Neighbors and donated 500 to national parks in the U.S. since its debut; the City has sold 1,000 units.

### **23. Ford, Ballard Unveil Hydrogen-Fueled Generator**

Ford Motor Co. and Canadian fuel cell developer Ballard Power Systems Inc. have jointly unveiled a hydrogen-fueled internal combustion engine-driven generator they said could help pave the way toward the commercialization of fuel cell technology. Ballard plans to begin producing the stationary generators, powered by a Ford 6.8 liter V10 truck engine, in the fourth quarter of this year. The initial customers for the engine are expected to be public utilities, which could use the generators during peak power demand.

The Ballard Ecostar hydrogen generator, able to produce 114 kilovolt-amperes (kVA) of power, will be part of Ballard's foray into the market for generators, tens of thousands of which are sold each year. The generator will also help Ballard cut costs and create sales channels as it drives toward its target of generating profits by 2006 at the latest. Three weeks ago, Ballard introduced a natural gas-burning generator powered by a Ford 4.2 liter V6 engine.

General Motors Corp. announced recently that it will enter the multibillion-dollar market for backup power generator systems by 2004 by selling stationary fuel cells to businesses that are highly dependent on reliable energy supplies. Ballard and GM are among the world leaders in developing proton

exchange membrane fuel cells, which create electricity through an electrochemical process using hydrogen and oxygen.

### **24. New Study Finds Bigger Not Better When It Comes to SUVs**

Bigger is not necessarily better on the open road according to a new study that shows lightweight, fuel efficient autos are safer for the driving public than the average sport utility vehicle. Researchers at the University of Michigan and the Lawrence Berkeley National Laboratory found SUVs are just about the most dangerous cars on the road for all drivers.

"Our main results are that sport utility vehicles are not necessarily safer for their drivers than cars," the report said. "On average they are as risky as the average mid-size or large car, and no safer than many of the most popular compact and subcompact models.

The analysis, recently presented to lawmakers in Washington, compared the risk of death in traffic accidents based on vehicle types and models sold between 1995-1999 using data on traffic deaths published by the National Highway Traffic Safety Administration.

"We focused on the risk not only to occupants of the vehicle model in question in all types of crashes, but also on the risk to the drivers of other vehicles involved in crashes with the model in question," said Tom Wenzel, a researcher at the Berkeley laboratory who co-wrote the report.

The researchers also factored in the age and sex of the typical driver of a specific vehicle model and how that auto was normally driven. The result showed for some kinds of cars -- but not SUVs -- certain characteristics played a strong

role in safety. For example, sports cars were found to be extremely dangerous to their drivers, who tend to be young and aggressive. And the safest vehicles were minivans, which the researchers said were typically driven with special care because they are often used to transport children.

But the report added there was no evidence a driver's age and sex were responsible for the higher SUV risk, leaving researchers to conclude the vehicles' weight might make them more dangerous because they are harder to control and more prone to rolling over.

According to the report the safest small cars, the Volkswagen Jetta and Honda Civic, were shown to be twice as safe as the comparably sized Chevrolet Cavalier, Ford Escort, and Dodge Neon. Even so, when considering the combined risks to all drivers on the road, most cars are safer than the average SUV, the report said.

### **25. Canadian Agency To Designate Smog Components As Toxic Substances**

Environment Canada proposes adding ozone, its precursors, and precursors of respirable particulate matter 10 micrometers or less in diameter to its list of toxic substances. The agency says designating smog components as toxic substances will allow the government to develop detailed plans to limit emissions that threaten life, health, the environment, and biological diversity. The specific substances proposed for designation as toxic are gaseous ammonia, ozone, sulfur dioxide, nitric oxide, nitrogen dioxide, and volatile organic compounds, the analysis statement said.

The statement cited the following evidence of the toxicity of each of the

substances:

- Ozone--the CEPA Working Group on Air Quality Objectives and Guidelines concluded in 1999 that, on the weight of evidence, there was a sufficient scientific basis to support the mortality relationship, and the Science Assessment Document (SAD) for Ground-Level Ozone published in October 2000 concluded that there is a sufficient association between ambient ozone and adverse health effects and vegetation at the ozone levels currently experienced across Canada;
- Sulfur dioxide--the Priority Substances List (PSL) Assessment Report on PM-10 specified SO<sub>2</sub> as one of the principle precursors to PM-10, which has been designated as posing a danger to human life or health, and assessment reports on emissions from primary and secondary copper and zinc smelters and refineries found that SO<sub>2</sub> posed a direct risk to vegetation;
- Gaseous ammonia--also identified by the PSL Assessment Report on PM-10 as a principle precursor to PM-10, and other reports suggest that it is being emitted into the environment in a quantity or concentration that poses a danger to human life or health;
- Nitric oxide and nitrogen dioxide--identified by both the SAD for Ground-Level Ozone and the PSL Assessment Report on PM-10 as posing a long-term danger to the environment or its biological diversity at the concentrations in which they are currently being emitted into the environment; and
- Volatile organic compounds--VOCs are also identified as among the principle precursors for the formation of both ground-level ozone and PM-10

and are considered to be entering the environment in concentrations and quantities that pose a threat to the environment and biodiversity, as well as to human life or health.

"Based on the science available, we conclude that the above-mentioned substances are entering the environment in a quantity or concentration or under conditions that constitute or may constitute a danger in Canada to human life or health," the regulatory impact analysis statement said.

"Further, ozone and SO<sub>2</sub> are concluded to be entering the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity. Consequently [the federal environment and health ministers] have determined that the alternative of taking no further action is not acceptable for the six substances mentioned above," the statement said.

"During the risk management phase, a suite of instruments with a balance of preventive and control measures and technologies are expected to be considered in consultation with various federal government departments, provincial, and territorial governments and other stakeholders."

The proposed designation order is open to 60 days of public comment.

## **26. Transboundary Actions by U.S., Canada Graded as 'Deficient' by Advisory Board**

A board of the International Joint Commission found the U.S. and Canadian governments "deficient" in a report card issued July 16 on what has been accomplished in the past four

years concerning major transboundary air quality issues facing the two countries. The chairs of the Canadian and U.S. sections of the International Joint Commission said in the 2002 Report Card that although actions have been taken on several of the issues by one or both countries, much remains to be done on transboundary air quality.

The report was prepared by the Commission's International Air Quality Advisory Board as a follow-up to the board's 1998 Special Report on Transboundary Air Quality Issues between the United States and Canada, and it describes actions taken with respect to each recommendation in the 1998 report. The International Joint Commission is an independent, binational organization established by the Boundary Waters Treaty of 1909 to prevent and resolve disputes between the United States and Canada.

Specifically, the 1998 report focused on nine areas the two countries needed to act upon to improve, including emissions of nitrogen oxides, regional issues, and harmonization and standard-setting. The board noted that since 1998, total annual emissions of NO<sub>x</sub> have remained relatively constant, notwithstanding the extended use of natural gas and further controls on utilities and other large sources. The board recommended that, in the longer term, "non-carbon based forms of energy production must be considered."

In addition, there is a "critical need to reexamine regional issues in light of energy deregulation and shifting demand" in the energy market, the report said. Also, because current practices are "not sustainable," the board said, "further reductions in vehicle emissions are warranted, as growth in vehicle use offsets more stringent motor vehicle emission standards."

The two governments should explicitly consider transboundary issues in the implementation and management of all air quality standards to develop harmonization between the neighboring countries, the board said. Given that "formal exchange of expertise has not occurred" in the past four years, and transparency with broad binational consultation in setting air quality criteria has been lacking, the board said, harmonization on transboundary issues is so far "deficient."

The board was formed in 1966 and has ten members, equally divided between Canada and the United States, who have expertise in various aspects of air pollution effects and control. They are appointed by the commission and serve as advisers through semiannual progress reports, workshops, technical analyses, and published reports on the many aspects of transboundary air pollution.

### **27. ARB Approves Amendments to the CaRFG Regulations**

The California Air Resources Board (ARB) has recently approved amendments to the California Reformulated Gasoline (CaRFG) regulations to prohibit MTBE effective January 1, 2004 and to delay of the "residual limit" deadline by one year. Beginning December 31, 2003, California gasoline cannot contain more than 0.30 volume percent MTBE and the residual limit will be decreased to 0.15 percent MTBE effective December 31, 2004 and to 0.05 volume percent MTBE starting December 31, 2005. In addition, the use of non-MTBE ethers and alcohols other than ethanol in California gasoline is banned from December 31, 2002 to December 31, 2003 and the imposition of CARB Phase 3 RFG limits for gasoline properties is postponed to December 31, 2003.

### **28. U.S., Canada Have 'Inequitable' Effect On Global Environment, UNEP Says**

Unsustainable patterns of production and consumption in the United States and Canada are a major cause of damage to the global environment, the UNEP says, asserting that the two nations have an "inequitable and unsustainable impact" on the environment, extending far beyond their borders, particularly in the area of climate change.<sup>4</sup> The report, released Aug. 12, noted that the United States and Canada have made important gains in environmental protection over the past 30 years, in part due to economic growth and general prosperity. However, "it is ever more apparent that affluence stimulates consumption and energy use, which have offset advances in environmental efficiency," the report said.

UNEP compiled the report in collaboration with the World Resources Institute, the International Institute for Sustainable Development, and the North American Commission on Environmental Cooperation and released it in advance of the World Summit on Sustainable Development, which began Aug. 26 in Johannesburg. It examines environmental performance since the U.N. Conference on the Human Environment in Stockholm in 1972 and assesses prospects for further progress.

The report noted that rising per capita incomes and a consumer lifestyle "based on the desire for mobility, convenience, and product disposability has undercut the further enhancement

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<sup>4</sup> , "North America's Environment: A Thirty-Year State of the Environment and Policy Retrospective"

of resource efficiency and waste reduction." Energy use in the two countries grew by 31 percent between 1972 and 1997, and progress in fuel efficiency has been offset by a rise in the number of automobiles and the number of kilometers traveled as well as a desire for heavier, less fuel-efficient automobiles, the report said. Annual gasoline consumption per capita is nine times the world average, it said. The result is a region that has a disproportionate impact on global climate change, given that the two North American countries have about 5 percent of the world's population but account for 25.8 percent of global emissions of carbon dioxide, the most important of the greenhouse gases.

The authors said North America needs to accept more responsibility for environmental changes, in part to prevent wasteful patterns of production and consumption from spreading around the world, and put in place effective reforms. Specifically, the report said the region needs substantial and concrete changes in its automobile use, more fuel-efficient technologies, and changes in municipal planning and urban development strategies that curb sprawl, including investment in public transport.

### **29. US Summer Of 2002 Is Hottest Since 1930s Dust Bowl**

With nearly half the country reeling from a blistering drought, this summer is the hottest since the depression-stricken "Dust Bowl" era of the 1930s, U.S. government weather experts have announced. The National Oceanic and Atmospheric Administration said the average temperature for the contiguous United States from June through August was 73.9 degrees (23.3 degrees Celsius), the third hottest summer since records began in 1895. Summer officially ends on Sept. 22. The only

summers warmer were 1936 and 1934, when vast numbers of farmers were driven from their land by drought.

Although the U.S. economy is no longer as dependent on agriculture as it was in the 1930s, a major drought two years ago caused damage worth \$4 billion and claimed 140 lives nationwide. That summer in 2000 was only the 12th warmest on record.

Moderate to extreme drought covers more than 45 percent of the United States. Six states - North Carolina, Virginia, Colorado, Utah, Arizona and Nevada - are suffering their worst drought on record, NOAA said. South Carolina, Maryland, Georgia, Delaware and Wyoming are also near unprecedented dry levels.

The prolonged drought has scorched U.S. wheat, corn and soybean crops, which will be the smallest in years. More than 50 percent of pastures were classified as poor to very poor in 24 states, leaving ranchers with little to feed their livestock.

So far this year, South Dakota officials have reported over \$1.8 billion in agricultural losses, while Texas claims \$316 million in damages. Costs to fight forest blazes this year are expected to amount to more than \$1.25 billion.

NOAA said this year's drought would continue to linger for another six months due to the arrival of a weak El Nino weather anomaly. The most extensive national drought in the past 100 years was in 1934 when it hit 80 percent of the country. Studying tree ring records, NOAA researchers said the severity of the 1930s drought was likely surpassed only in the 1570s and 1580s.

### **30. EPA Adopts Gasoline Fueled Off-Road Vehicle Emissions Rules**

The Environmental Protection Agency (EPA) has issued new standards to limit air pollution from snowmobiles and other off-road vehicles. The rules apply to over a million estimated U.S. conveyances, ranging from yachts and cruisers to forklifts, motorbikes, airport support equipment and other gasoline-powered vehicles.

EPA says the new rules, among the first air-pollution standards to be finalized by the Bush administration, will take 2 million tons of smog and other unhealthy substances out of the air every year, and save \$8 billion in health-related costs by 2030, when older engines now in operation should be fully phased out, the EPA said.

"It's equivalent to taking about 32 million cars off the road," according to EPA. "Engine for engine these sources put out a lot more pollution than cars do." For example, a snowmobile can spew as much pollution as about 100 automobiles, according to EPA data.

The agency faced a court-ordered deadline to finalize the rules.

Emission rules governing snowmobiles elicited the biggest response from environmental groups. The Bush administration this year allowed snowmobiles to enter national parks like Yellowstone and Grand Tetons, reversing a Clinton administration ban. Amid heavy lobbying pressure from the White House and snowmobile makers, the EPA backed off from a stronger set of rules it was previously considering, environmental groups said.

The EPA in 2001 proposed to reduce snowmobiles emissions of carbon monoxide and hydrocarbons by 30

percent in 2006 and 50 percent by 2010. The final version of the rules includes a 50 percent cut in hydrocarbons by 2010, but only a 30 percent cut in carbon monoxide.

### **31. US Lawmakers Agree To Trim Vehicle Gasoline Use Very Slightly**

Senate and House negotiators working on a final energy bill have agreed to modestly trim the amount of gasoline burned by light trucks and sport utility vehicles by 5 billion gallons over 7 years. But critics countered that such an amount would do little to reduce U.S. dependence on foreign oil. The 5-billion-gallon reduction would have the effect of the raising the average fuel economy by less than 1 mile per gallon, according to Democrats who wanted much tougher standards.

The new standard would affect sport utility vehicles, light trucks and minivans built in 2006 through 2012. The plan requires the Transportation Department to figure out how to best meet the gasoline savings goal, such as boosting economy standards or promoting alternative fuel vehicles.

Democratic Rep. Edward Markey of Massachusetts said it made no sense for the United States to send soldiers to Iraq, but not move to significantly raise vehicle mileage requirements that would reduce oil imports from Iraq. "The net result is ... we're not saying anything of any significance about the importation of oil from the Middle East," Markey said.

The United States is the largest consumer of oil and oil products in the world, using about 20 million barrels a day. American drivers soak up an average 8.8 million barrels of gasoline per day (one barrel equals to 42 gallons). So the 5 billion gallons in

savings would equal 119 million barrels of motor fuel, or about two weeks of U.S. gasoline consumption.

Environmentalists and some Democrats had sought much stricter mileage standards, especially for gas guzzling sport utility vehicles. Under rules adopted nearly 30 years ago, the combined fuel efficiency of U.S. sport utility vehicles, mini-vans and cars must be at least 24 miles per gallon. However, Republicans said the increase in fuel efficiency standards was a significant step. "This will tell Saddam Hussein: 'We don't need your oil,'" said Rep. Billy Tauzin, a Louisiana Republican who chairs the Senate and House negotiating panel.

Supporters of the gasoline savings plan said about 20 vehicles are already on the market with higher fuel standards than required by federal law. "So the consumer has choices," said Republican Rep. Cliff Stearns of Florida.

Negotiators also agreed to drop a provision in the Senate-passed energy bill that would have exempted pickup trucks from future government-mandated increases in mileage standards.

Lawmakers extended by four years to 2008 federal credits in meeting mileage requirements for manufacturers of dual-fueled vehicles that can run on corn-based ethanol and traditional gasoline. Environmentalists said the dual-fuel extension would allow automakers to compensate for their less efficient vehicles and would wipe out the 5 billion gallon in gasoline savings because ethanol is not available in most parts of the country. For example, the dual-fuel loophole allows a 22 mile-per-gallon Ford Ranger to count as a 36-mpg vehicle because it could use ethanol, even though there are only two ethanol stations on the East Coast and none on

the West Coast.

Negotiators also rejected an amendment from Republican Sen. Frank Murkowski of Alaska to restore Senate language that would have required the federal government to consider the effects higher mileage requirements would have on the safety of vehicles and autoworkers' jobs. Automakers contend that higher mileage standards would force them to produce lighter vehicles that are less safe and more expensive. Such vehicles would be unpopular with consumers and autoworkers would be laid off, the companies said. "When you begin to drop (vehicle) weight, you begin to compromise safety," said Murkowski. The Bush administration expressed "disappointment" with the vote rejecting a review of auto safety and industry jobs. "The president supports increasing fuel efficiency and doing it in a way that protects lives and jobs," said White House spokesman Ari Fleischer.

Lawmakers must still deal with several other contentious issues before finalizing the energy bill, including whether to allow drilling in the Arctic National Wildlife Refuge, require more use of ethanol-blended gasoline and adopt electricity market reforms.

After negotiators clear a compromise bill, it must go back to the House and Senate for approval by each chamber. President George W. Bush urged lawmakers to send him an energy bill before Congress' adjournment in October but that did not happen.

### **32. GM Aims To Cut PGM Use By 17 Percent By 2006**

Improved anti-pollution technology will allow General Motors Corp. to continue slashing the amount of platinum group metals (PGM) in vehicles over the next

four years, the head of metals procurement at the company has said. From 1999 to 2001, the company lowered the amount of platinum, palladium and rhodium used in catalytic converters by 45 percent, said David Andres, GM purchasing director for commodity-traded metals worldwide. "Plans are in place for further reductions in our PGM use - an additional 17 percent reduction between now and 2006 and we're certifying to a higher emissions standard effective 2004," Andres said at a seminar hosted by precious metals consultants CPM Group.

Andres said new technology has allowed GM to use less of the metals.

Russia accounts for around two-thirds of the world's palladium production and a fifth of its platinum. Leading car manufacturers depend on both metals in their catalysts to extract harmful pollutants from exhausts and have complained in the past of unexplained disruptions in Russian shipments.

Ford Motor Company took a \$1 billion charge last year on its platinum group metals stockpile after prices slumped.

The automobile sector has been trying to make catalytic converters more efficient to reduce their dependence on the metals and meet increasingly stringent global emission standards. Based on estimates of supply, cost and the amount of platinum group metals required for the 38 million automobiles subject to low emission vehicle rules globally, Andres said GM engineers are instructed to estimate future loadings of not more than 1.5 grams of platinum, 3.0 grams of palladium and 0.3 gram of rhodium per vehicle.

GM is also working on fuel cells as an alternative to internal combustion engines. Fuel cells now use about 2

ounces of platinum group metals per unit, Andres said. The company is showcasing its Autonomy fuel cell concept car this year. Andres predicted that fuel cell propulsion would be economically viable by 2010, and by 2020 GM expects fuel cell cars to be affordable with deep market penetration. But he said "Price chaos in platinum could well set back development of fuel cells by a decade or more."

### **33. Caterpillar Diesel Engine Certified By US EPA; Will Pay NCPs**

Caterpillar Inc. said the U.S. Environmental Protection Agency has certified its newest diesel engine, allowing it to keep selling engines once new federal emissions standards take effect Oct. 1. The approval, conditioned upon final EPA testing, allows Caterpillar to sell its engine in 49 states and Canada with no restrictions. The company reportedly expects the state of California to certify the engine as well.

According to Caterpillar, the EPA said it will be unable to complete the necessary certification work before the Oct. 1 deadline but does not expect any obstacles to full certification.

The company's newest diesel engine does not meet the new emissions standards and Caterpillar said it expects to pay a penalty as a result. The exact amount of those penalties will be determined by tests that haven't been done yet, it said.

The company said it expects to complete development of an engine based on its ACERT technology, which does meet the standards, by the end of the first quarter. It hopes to start selling the ACERT engine sometime in the second quarter.

### **34. EPA Set To OK Massachusetts**

### Program Despite Bush Opposition To Clean Air in California

The Environmental Protection Agency proposed approving a vehicle low emission program for Massachusetts, but will postpone acting on those parts of the plan that include the tough zero emission standards adopted in California that Justice Department lawyers oppose. Massachusetts wants to incorporate the California vehicle zero emission standards that the Bush administration said earlier this month infringed on the federal government's authority to set vehicle mileage requirements.

The White House sided with automakers DaimlerChrysler AG and General Motors Corp. in opposing the California standards. The Justice Department, acting on behalf of the administration, filed a brief with 9th U.S. Circuit Court of Appeals supporting a federal judge's injunction that delayed the California vehicle emission standards from taking effect for two years until the 2005 model year.

Environmentalists have criticized the Bush administration for opposing California's tough vehicle emissions standards, arguing the White House wants to protect U.S. automakers at the expense of clean air.

The California standards that Massachusetts wants to adopt would require 10 percent of vehicles sold to produce no pollution.

U.S. automakers would have a tougher time in meeting such a tough requirement compared to Japanese competitors Toyota Motor Co. and Honda Motor Co., which already build several low emission vehicles that also have higher fuel economy.

EPA asked for public comment through

Nov. 14 on Massachusetts' emissions reduction program.

### ASIA-PACIFIC REGION

#### 35. Car Sales Growing Rapidly in China

Sales of domestically made vehicles increased by 31 per cent year-on-year to 1.80 million units from January to July this year, according to the China Association of Automobile Manufacturers. In Beijing, the largest market, a total of 133,000 motor vehicles were sold in the first half of this year, rising 19.2 per cent year on year, according to the Beijing Municipal Statistics Bureau. Of the total, 99,000 were new cars, up 30 per cent on a year-on-year basis. Sales of cars, buses and trucks rose 13 percent to 2.35 million in China last year.

In July, sales of **passenger cars** in China rose 62% from a year earlier to 107,203 vehicles. The heavy demand is expected to push **car** sales above the one million mark this year for the first time.

As a result of this strong demand, profits for China's major automakers are rising rapidly. According to statistics from the State Economic and Trade Commission (SETC), the nation's 15 key automakers earned total profits of 10.57 billion yuan (US\$1.27 billion) during the first half of this year, an increase of 33.7 per cent over the same period of last year. Their profits in July alone reached 2.01 billion yuan (US\$242.16 million), up from 1.43 billion yuan (US\$172.28 million) from the monthly average during the first half of this year, the statistics showed.

According to the Ministry of Foreign Trade and Economic Co-operation (MOFTEC), China imported around 67,000 vehicles in the first seven

months of this year, up 45.3 per cent from a year earlier. The imports were much less than what was expected by analysts at the beginning of this year as a result of control on vehicle import license distributions.

Profits from China's top three vehicle manufacturers - First Automotive Works (FAW), Shanghai Automotive Industry Corp (SAIC) and Dongfeng Motor Corp - grew by 2.91 billion yuan (US\$350.60 million) year-on-year during the first seven months of this year, accounting for 93 per cent of the total profit increase of the nation's 15 key automakers, said the SETC.

### **36. Toyota, FAW Joint Venture Indicates Substantial Future Growth in China**

Toyota Motor Corp. and China's First Automotive Works (FAW) have agreed to establish joint operations in China, the two companies said on August 29. The automakers aim to sell 300,000 to 400,000 vehicles in 2010 via their joint operations, with products including medium-grade and luxury passenger cars, sport-utility vehicles and mini cars. (That's about the same number that Volkswagen AG, China's leading carmaker, now sells annually in the nation.)

The joint operation is expected to help Toyota, the world's third-largest car maker, substantially expand its share of the fast-growing Chinese auto market.

FAW acquired a 51 per cent stake of Tianjin Xiali in June, representing the biggest shake-up ever of China's fragmented automotive industry. Toyota Motor Corp has a US\$100-million passenger car joint venture with Tianjin Xiali, which will begin to produce Toyota's T-1 sedans in October of this year.

FAW also signed an agreement in August to buy a 58 per cent stake in Sichuan Wagon Co. Toyota and Sichuan Wagon Co have a US\$67-million joint venture in Southwest China's Sichuan Province, which is producing Toyota's Coaster-brand buses.

Toyota and FAW would make "mini cars" at FAW's facility in Tianjin starting in mid-2003, with annual production of about 100,000 vehicles.

Production on Toyota-branded luxury SUVs will also start in mid-2003 at a facility in Changchun that will produce 10, 000 to 20,000 vehicles a year. Production of medium- and large-sized luxury sedans will start in 2005; Toyota hopes to produce 50,000 a year of those vehicles at the facility in Tianjin.

Zhu Yanfeng, general manager of FAW, said co-operation with Toyota will further strengthen FAW's manufacturing bases in Changchun, Northeast China's Jilin Province, Tianjin and Sichuan. Annual sales of the Changchun-based FAW are expected to exceed 1 million units in the near term through co-operation with Toyota Motor Corp, Zhu said. The company will sell more than 500,000 vehicles this year, up from 400,000 units last year, according to Zhu.

Toyota Motor Corp President Fujio Cho said that Toyota will do its utmost to invest in and bring more technology and vehicles into China because the nation has become one of its most important markets around the world. The Japanese carmaker has already set a long-term target of controlling 10 per cent of the Chinese car market.

Toyota will also help FAW upgrade its Red Flag sedan.

The entry into China is particularly

important for Toyota, which has lagged behind such rivals as Volkswagen, General Motors Corp. and Honda Motor Co. in setting up big production plants in the nation. Toyota already has announced an ambitious goal of grabbing 15% of the world's auto market by 2010; if met, that would likely put Toyota at or near the top of the industry. To do that, it must capture a significant chunk of the Chinese market, which automakers predict will be one of the biggest sources of growth.

Toyota's expansion comes just as China's auto market is starting to take off after years of languid sales. Unlike in the past, when government purchases accounted for a big chunk of China's car market, much of the sales growth is now coming from middle-class consumers. Falling prices and rising incomes are making new cars affordable for more Chinese, while a massive road-building campaign over the past several years has given drivers more places to go.

Toyota's competitors in China aren't idling. General Motors, Ford and Volkswagen already are planning to expand the range of cars they offer in China. Ford, for instance, will launch an economy car later this year at its new plant in central China, while GM is considering a plan to add a midsize sedan to its lineup. Volkswagen, which also operates a factory with FAW and now accounts for just under half of all passenger car sales in China, has similarly aggressive plans. Volkswagen plans to invest 2.5 billion euros (\$2.45 billion) in Asia during the next five years as it markets new products and builds a transmission plant in China with partners.

Hyundai Motor Co., South Korea's largest automaker, signed an agreement in May to invest \$1.1 billion in a new auto venture with Beijing Automotive Industry Holding Co. The venture, split

evenly between the two partners, has started work on a new plant to build as many as 500,000 cars a year in China by 2010.

A summary review of the current status of the Chinese automotive sector is contained in Appendix A.

### **37. Toyota To Double Hybrid Vehicle Lineup By 2003**

Toyota Motor Corp plans to double the number of its eco-friendly hybrid models to six by the end of 2003 to cement its lead in the growing field of low emission vehicles, the Nihon Keizai Shimbun's said. Toyota, Japan's largest automaker, will release in the fall a hybrid gas-electric version of its 2-liter Crown sedan and will later add hybrid models of the Harrier sport-utility vehicle, along with its recently debuted Alphard minivan, the paper said. The hybrid version of the Harrier, a popular model known as Lexus RX300 in the United States, will be exported to U.S. dealers, the report said.

Toyota, which last August debuted a 3-liter hybrid Crown, or Camry in the United States, will market the 2-liter hybrid Crown mainly to government and municipal offices that are increasingly replacing their cars with low-emission vehicles, the paper said. It also noted that Toyota would likely keep the price of the new hybrid Crown only 150,000 yen higher than the gasoline-powered model.

Since the automaker pioneered the way with the world's first hybrid car Prius in 1997, Toyota has sold a total of 100,000 hybrid cars, 30 percent in overseas markets, the paper said.

Toyota enjoys a 90-percent share of the global market for eco-friendly vehicles and hopes to triple annual production of

hybrid cars to 300,000 units in 2005, the report said.

Honda Motor Co is the only other automaker so far to mass-market hybrid vehicles - the two-seater Insight and a recently launched hybrid version of the Civic compact.

### **38. Nissan To Start Selling Fuel Cell Cars In 2003**

Nissan Motor Co Ltd, Japan's third largest automaker, has announced that it plans to sell its first fuel cell car next year, speeding up its original plans for a launch in 2005. "We are advancing it by two years," Nissan Chief Executive Carlos Ghosn told a news conference. Nissan is working with partner Renault SA of France in fuel cells.

Customers are likely to be government bodies, research institutions and energy companies.

### **39. Toyota, Nissan To Cooperate On Hybrid Systems**

Japan's top automaker, Toyota, and third-largest Nissan have announced an agreement to cooperate on hybrid systems including the sharing of technology. The agreement to cooperate over at least 10 years calls for Toyota to supply state-of-the-art hybrid system components to Nissan, the two automakers said in a joint statement.

As an initial project, Nissan will install a hybrid system being developed by Toyota in its vehicles to be sold in the United States in 2006.

### **40. Summer Sale of Low-Volatility Gasoline To Be Mandatory in Sydney by September**

The sale of low-volatility gasoline, which evaporates more slowly and therefore reduces emissions of the volatile organic compounds that help to form ozone, will become mandatory in Sydney during next summer, according to the regulatory impact statement (RIS) for a revised New South Wales (NSW) clean air regulation. The proposed Protection of the Environment Operations (Clean Air-Motor Vehicles and Motor Vehicle Fuels) Regulation 2002 is expected to come into force on Sept. 1, the date on which the existing regulation will automatically expire. The NSW government will further amend the new regulation so as to mandate the fuel's seasonal sale after Sept. 1, but before the 2002-2003 summer, said the RIS prepared by the NSW Environment Protection Authority (EPA).

Work undertaken in 1996-97 by the NSW EPA and the NSW oil industry established that when compared with a range of other ozone reduction measures, reducing gasoline volatility in summer is a relatively cost effective strategy for reducing ozone levels in the Sydney region.

The introduction of a mandatory summer gasoline requirement follows mixed success with a voluntary program in the Sydney region over the past four years. In the first two years, there was close to 100 percent compliance with the terms of a voluntary agreement negotiated between the EPA and the oil industry. "However, in the third summer there was a poor level of compliance," the RIS said. Compliance levels did improve last summer, the RIS noted.

The new regulation will increase the on-the-spot fine for smoky vehicles from A\$112 (\$60.48) to A\$200 (\$108) for individuals and A\$400 (\$216) for corporations. Other changes to be implemented in the new regulation include a provision that the registered

owner of a vehicle will be deemed liable for any tampering with vehicle anti-pollution devices.

#### **41. Vietnam Sets Up Fund to Boost Investment in Environmental Projects**

The Vietnamese government has established an environmental protection fund that will be used to drum up capital from public- and private-sector sources for environmental conservation projects and activities.

Deputy Prime Minister Pham Gia Khiem signed a decision approving the establishment of the fund in late June that took effect July 13. The government will assign \$13 million of the state budget to the fund in its first two years as statutory capital. The fund is under the control of the Ministry of Science, Technology, and Environment (MOSTE) and the Ministry of Finance.

Nguyen Ngoc Sinh, director-general of the MOSTE's National Environment Agency (NEA), added that the government expected the fund to help attract further aid and investment from multilateral donors and companies in environment-related projects.

#### **42. Ethanol-Blended Petrol Mandatory In Nine Indian States From Jan 1**

The Government has made sale of 5 per cent ethanol- doped petrol mandatory in nine States and four Union Territories from January 1, 2003. As part of efforts to reduce oil import dependency, the sale of 5 per cent ethanol-doped petrol is being mandated in Uttar Pradesh, Punjab, Haryana, Gujarat, Maharashtra, Goa, Karnataka, Andhra Pradesh and Tamil Nadu and Union Territories (UTs) Chandigarh, Damman & Diu, Dadara &

Nagar Haveli and Pondicherry with effect from January 1, 2003, the Petroleum Minister, Mr. Ram Naik, said at the consultative committee meeting of Petroleum Ministry.

With about 70 per cent of the country's oil requirement being met through imports, the decision would help reduce oil dependency, he said. It would also benefit sugarcane growers in these states and UTs that forms part of the first phase of introducing ethanol-doped petrol (gasohol) throughout the country, he said.

#### **43. Japan Automakers Aim To Further Cut Emissions**

Japanese carmakers are stepping up efforts to reduce harmful emissions, aiming at having 80 percent of new cars set to hit the domestic market by the end of fiscal 2003 certified as eco-friendly, the Nihon Keizai Shimbun reported. The move is seen likely to improve the overseas competitiveness of Japanese carmakers as nations around the world shift to increasingly tight emissions policies.

Japanese carmakers apparently intend to substantially reduce the amount of nitrogen oxides and hydrocarbons released by their cars, aiming for eco-friendly certification issued by Japan's Transport Ministry.

Honda Motor Co Ltd hopes to win this certification for some models of its new Accord sedan that go on sale later this month, while Mitsubishi Motors Corp aims to do the same for its Colt subcompact, set to go on sale in December, company officials were quoted as saying. Honda plans to produce even more low emission cars after the new Accord is launched, and win certification for most of its vehicles, except for light trucks, by the end of

2005, the Nikkei said. Currently, LEVs and ultra-low-emission vehicles make up 50 percent of Honda's domestic sales.

Mitsubishi Motors hopes to win certification for 70 percent of its passenger cars, excluding minicars, by April 2004.

Toyota Motor Corp and Nissan Motor Co Ltd having already won the eco-friendly stamp for a number of their models. The industry leader, Toyota Motor Corp., already has 55 models certified as "low emission," and LEVs make up 90 percent of its new domestic auto sales.

Nissan's Fairlady Z sports car and March have already gained the eco-friendly seal, and about 80 percent of its cars are likely to be certified by the end of the current fiscal year in March 2003, the Nikkei said. At an Oct. 8 news conference, Nissan President Carlos Ghosn said his company's lineup of low-emission autos would make up more than 80 percent of new models sold in Japan by the middle of 2003.

Once Japan promulgates stricter automobile emission standards--part of its drive to meet its GHG-reduction commitment under the Kyoto climate change pact--it will effectively erect a trade barrier that other auto-exporting nations may find difficult to scale. Since Japan's efforts to meet its Kyoto Protocol commitments could restrict auto imports, the issue must be worked out in advance with the World Trade Organization. Many automobiles imported to Japan--particularly American-made vehicles--may not be able to clear the new emission standards, making those vehicles ineligible for sale in Japan.

In a submission filed Oct. 10, the Japanese government urged the World

Trade Organization to allow automobile import restrictions that result from a nation's drive to meet its GHG-reduction commitments under the Kyoto Protocol. Japan essentially asked the WTO to give environmental protection priority over trade liberalization principles. The submission did not include details of what Japan plans to do to meet its Kyoto obligations, but it is understood to refer to a host of policies considered by the Japanese government in recent years, among them the introduction of carbon and other environmental taxes and more stringent carbon dioxide and other automobile emission and auto-related environmental standards.

These policies would apply to both domestic and foreign automakers as well as to manufacturers of other industrial products that release greenhouse gases.

In fiscal 2001, Japan's domestic LEV sales soared to 2,390,762 units--2.7 times higher than they had been in fiscal 2000, according to data released Oct. 11 by the Japan Automobile Manufacturers Association (JAMA). That total accounted for 41 percent of domestic sales of vehicles manufactured by Japanese automakers, up sharply from 15 percent in fiscal 2000.

Low-emission vehicles in Japan are ranked by a star system. LEVs with tailpipe emissions--primarily nitrogen oxides (NOx), sulfuric oxide (SOx), and hydrocarbons--that are 75 percent lower than standards that took effect in fiscal 2000 are given three stars. Vehicle weight, fuel consumption, and improved gas mileage are also taken into consideration. LEVs with tailpipe emissions that are 50 percent lower than the year 2000 standards net a two-star ranking, and LEVs whose tailpipe emissions are 25 percent lower than they were in 2000 get one star.

In separate data, JAMA reported that gasoline-electric motor hybrid auto sales in fiscal 2001 totaled 25,111 units, up 194 percent over fiscal 2000.

In contrast to Japanese automakers' efforts, no foreign automakers are selling vehicles that meet Japanese LEV emission standards. This is raising concerns that many foreign automakers, including U.S. automakers, may fail to meet the next round of Japanese low-emission standards, which are expected to feature tougher emission limits for NO<sub>x</sub>, and SO<sub>x</sub>, and CO<sub>2</sub>. This could result in an environmental trade spat in a few years, particularly between Japan and the United States.

Indeed, the LEV boom is prompting the Japanese government to explore more restrictive emission standards, particularly for CO<sub>2</sub>, to contribute to reducing the transport sector's greenhouse gas emissions, as well as a means to help improve Japanese automobile technology.

In addition, supposedly one of the key reasons Japanese automakers are pushing to develop even lower-emission vehicles is to meet a new California law that requires the Air Resources Board to set tailpipe emission limits for carbon dioxide and other greenhouse gases.

#### **44. Japan Says Emissions of NO<sub>2</sub> Holding Steady While Particulates Declining**

Average nitrogen dioxide (NO<sub>2</sub>) levels in fiscal 2001 were unchanged from the preceding year, while suspended particulate matter (SPM) decreased for the second consecutive year, according to the Ministry of Environment's annual report on air pollution released Sept. 26. The ministry attributed the improvements to the availability of

cleaner motor vehicle diesel engine technologies and tougher tailpipe emission requirements.

Out of the 1,465 NO<sub>2</sub> monitoring stations in Japan, 1,451 registered an average daily level of 0.06 parts per million (ppm) during fiscal 2001, which ended in March 2002, the ministry said in its report. While levels from vehicles held steady, NO<sub>2</sub> emissions from other sources declined, resulting in a drop in total NO<sub>2</sub> emissions.

Only Tokyo, Osaka, Saitama, and Kanagawa prefectures failed to keep their NO<sub>2</sub> levels to less than 0.06 ppm, the ministry said. The levels in those regions are expected to fall starting in 2003, when Tokyo and surrounding prefectures enforce their "Say No! to Diesel" city ordinances, banning the use of diesel-powered vehicles unless they are equipped with diesel particulate filters.

At 66.6 percent of observatories, SPM release stood at less than the maximum tolerance level of 0.1 milligrams, declining for the second consecutive year, the ministry said.

#### **45. Indonesia To Halt Use Of Leaded Fuel From Jan 2003**

The ministries of transportation and of energy and mineral resources have agreed to stop the use of leaded fuel across Indonesia in January 2003, a cabinet minister has announced. Air pollution resulting from vehicular gas emissions in Indonesia had reached an alarming level, Transportation Minister Agum Gumelar said in an address (read by his aide for the environment and energy, Abdul Razak Manan). Director General of Land Transportation, Iskandar Abubakar, said the number of motor vehicles in Indonesia was growing by 8% to 12% year. Air pollution in

major Indonesian cities was getting worse not only because of the aging of public transport vehicles but also because of the poor maintenance of motor vehicles as a result of the prolonged economic crisis, he said. State Minister for the Environment, Nabel Makarim, said tighter vehicular emissions standards are among the main policies to reduce the amount of vehicular emissions.

Last July 1, 2001 the government introduced unleaded gasoline in Jakarta and in Cirebon in October 2001.

In spite of the announcement, some local organizations and individuals remain skeptical.

#### **46. Singapore Launches Green Plan As Global Environmental Action Stalls**

Frustrated by the world's lack of progress toward sustainable development, Singapore launched on Aug. 24 its own blueprint toward economic progress that aims to preserve the environment of the country through clean air, waste management, and water conservation targets over the next 10 years.

A draft of the plan was issued in November 2001.

Among the targets, SGP 2012 aims to guarantee at least 310 clean air days each year. (This may be beyond Singapore's control as Indonesian forest fires blow smoke and pollutants across the South China Sea into its neighbors' territories every year.) In 2001, Singapore had 292 days of "good" air quality, according to the Pollutants Standards Index.

To help increase the number of good air days, public transportation in Singapore

is gradually being switched to use cleaner energy like compressed natural gas. The first CNG refueling station in Singapore opened in April, the same day a CNG bus took to the roads.

#### **47. Dhaka Begins Effort To Phase Out Polluting Two-Stroke Vehicles**

A partial ban on two-stroke vehicles entered into force in Dhaka on Sept. 1, putting pressure on the rest of the city's public transport system. The government was prompted into action by a directive from the nation's High Court on March 27, in which the court ordered the government to ban two-stroke auto-rickshaws by Dec. 31 and arrange their replacement with clean-fuel vehicles. The High Court decision followed a writ filed in 1995 by the Bangladesh Environment Lawyers Association and the Bangladesh Legal Aid and Services Trust. The writ was opposed by government agencies, including the Department of Environment.

Subsequent to the High Court action, the government of Bangladesh announced that all two-stroke three-wheelers would be banned from Sept. 1. However, after violent protests from owners and drivers, and due to concerns about finding sufficient replacement vehicles, the government backtracked slightly. Under the arrangements ultimately implemented, about 5,500 of the newest auto-rickshaws can continue to ply the streets of Dhaka. These vehicles will be specially marked to indicate they can continue to operate.

However, all other two-stroke three-wheelers were banned on Sept. 1, and the vehicles granted a reprieve must be off the streets from Jan. 1, 2003.

Efforts to ensure adequate replacement

clean-fuel vehicles are ready to fill the gap in public transport caused by the phase out of two-stroke three-wheelers have not been effective. More than 200 extra buses were promised, but they were not provided. Consequently, the pressure on other public transport services has been "very high."

The high sulfur levels in fuel compound the air quality problems in Dhaka. The level of sulfur in Bangladeshi diesel ranks among the highest in the world, at about 0.7 percent, according to the World Bank, resulting in significant particulate emissions. The incidence of adulteration of gasoline is also "very high". Because gasoline is relatively expensive, it is often diluted with diesel and kerosene, which reduces engine performance and increases emissions.

#### **48. Philippines To Ban Import of Most Used Motor Vehicles**

On September 18, Philippine President Gloria Macapagal-Arroyo reportedly approved "in principle" a recommendation by trade and environment officials to impose a ban on importation of used motor vehicles. The approval reportedly came after presentations made by Trade Secretary Manuel Roxas during a regular Cabinet meeting at the presidential Malacanang Palace, during which he outlined the dangers posed by secondhand vehicles not only to the environment but also to the struggling local auto industry.

Covered under the ban are "all types of vehicles" except "special purpose vehicles" like fire trucks and ambulances and vehicles of returning overseas Filipino workers. A draft memorandum order (MO) is currently being fast-tracked to "simplify and clarify the rules and regulations" that would then be passed to Arroyo for signing. But while an official order has yet to be signed,

Arroyo has already ordered the immediate implementation on the moratorium.

Used cars and other vehicles that have been phased out from more industrialized countries like South Korea and Japan are traditionally sold to the local market here at cheap prices. The Clean Air Act calls for the creation of vehicle emission testing centers in identified air sheds across Metropolitan Manila, but the government has so far failed to do so.

#### **49. Philippines to Defer Implementation Of Air Act's Rules on Aromatics, Benzene**

Philippine President Gloria Arroyo has reportedly secured backing from leaders of Congress to defer implementation of new gasoline specifications restricting content of aromatics and benzene under the Clean Air Act. Energy Secretary Vince Perez said the postponement was sought to help ease pressure on pump prices as a looming war with Iraq is expected to affect oil supply.

The 1999 Clean Air Act requires oil companies to reduce aromatic content in unleaded gasoline to 35 percent by 2003 from 42 percent at present and benzene content to 2 percent from 4 percent. Perez said the government wants to defer implementation of this provision in the act indefinitely. Perez said studies showed that the new specifications for fuel are projected to raise pump prices by an average of 1.50 pesos (two cents), with oil refiners expected to pass the added cost off to consumers.

The planned deferment was recently brought up to the National Security Council meeting chaired by President Arroyo and attended by her Cabinet members and leaders of Congress,

Perez said.

The announcement came shortly after the Department of Transportation and Communications said it had suspended on Oct. 1 mandatory emission compliance tests for vehicles in Metropolitan Manila. It said the tests would be fully re-implemented by next year to give time for vehicle owners to fix their engines. The government will evaluate the outcome of the initial implementation of the emission compliance tests in order to further improve the system, Transportation Ministry spokesman Thompson Lantion said.

The emission tests are also included in the Clean Air Act and are part of a larger campaign to rid Manila of "smoke belchers."

#### **50. Australian Ministers Agree to Release Draft National Measure on Fine Particles**

Australia's national, state, and territory environment ministers, meeting on Oct. 11 as the Environment Protection and Heritage Council, have agreed to release a draft national environment protection measure (NEPM) on ultra-fine particles. The NEPM on particles with a diameter of less than 2.5 microns (PM-2.5) will be introduced as a variation the existing ambient air quality NEPM. It proposes a one-day standard for PM-2.5 of 25 micrograms/cubic meter and a one-year standard of 8[mgr]/cubic meter. However, in an approach that differs from the strategy in the ambient air quality NEPM for dealing with other key pollutants, there will be no obligation on states, territories, or the national government to rein in any instances where PM-2.5 levels exceed these standards at this stage.

Instead, the specified standards are

advisory reporting standards, with jurisdictions expected to report annually to the council the extent to which the standards have been met. Preparing the variation in this form effectively makes the proposed requirements for PM-2.5 a data gathering exercise for a review of the entire air quality NEPM, scheduled to begin in 2005. According to the impact statement for the proposal, putting the PM-2.5 provisions in this way will make it possible to collect consistent national data on levels of these particles. This is important because at the moment, not all Australian states routinely collect data on levels of PM-2.5.

The closing date for submissions on the proposed variation regarding PM-2.5 is Dec. 24. Once submissions have been reviewed, the variation will go before the council for final approval.

Other outcomes of the ministerial meeting comprised:

- Announcement of two research projects to better understand the link between air quality and health. One study will assess the impact of air pollution on daily mortality and morbidity, using new data on particle levels. The other will be a study of the effects of air pollution on people with asthma, especially children.
- Agreement to release a policy discussion paper on waste tires for public comment; and
- Agreement to develop proposals for national action on hazardous waste management (including organochlorines) and for re-use of diversion of industrial waste.

#### **51. New Thai Ministry Could Lift Profile Of Thai Environment Protection**

The Thai government's has established

a new Ministry of Environment and Natural Resources (MOENR) to highlight that conservation and pollution control issues are key concerns of the current administration, but a host of questions surrounding the structure and policy plans of the new ministry remain. The MOENR, which opened its doors on Oct. 7, replaced the Ministry of Science, Technology, and Environment (MOSTE) as part of the government's bureaucratic reform package. Government restructuring also saw the creation of separate ministries of science, energy, and information and communications technology.

Prime Minister Thaksin Shinawatra appointed Prapat Panyachartrak, formerly deputy agricultural minister, to head the new body, while Plodprasop Suraswadi, previously director-general of the Ministry of Agriculture's Forestry Department, was named the MOENR's permanent secretary.

Under the MOENR will be several new agencies, including departments of water resources, groundwater resources, coastal resources, and national parks and wildlife, while some key agencies under the former MOSTE--such as the Pollution Control Department (PCD) and Office of Environmental Policy and Planning (OEPP)--will remain largely unchanged.

Tongroj Ochan, president of the Mekong Environment and Resource Institute (MERI) and a member of the executive board of the Ministry of Agriculture's National Research and Biodiversity Institute (NAREBI) as well as a member of an officially appointed task force in charge of drafting a national environmental plan that first proposed the idea of separate environment ministry to the government in 1992, said the new ministry would help reduce the conflicts between state agencies that have plagued environmental projects

and policy directives in the past by grouping environment-related departments into one body.

## **52. Beijing Approves Hong Kong/Guangdong Plan to Discuss Emissions Trading**

The Hong Kong government is looking to move ahead with an emission-trading scheme now that China has granted permission for talks with Guangdong provincial leaders. The idea of setting up an emissions trading center in Hong Kong was one of the first plans put forth by Sarah Liao, secretary for environment, transport, and works, when she took office in August. Liao said that Hong Kong power plants and factories could not trade with only other Hong Kong companies. She said the scheme would have to include Hong Kong neighbors, the Chinese province of Guangdong and Macao. Together the three jurisdictions comprise the Pearl River Delta, which has shown rapid growth and development in the past 20 years.

With growth came rising levels of pollution. A study conducted of Guangdong and Hong Kong air quality and released in April showed that sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) would increase 75 percent and 40 percent respectively by 2015 over 1997 levels if action is not taken. As a result of the study, the Hong Kong and Guangdong governments agreed to reduce the NO<sub>x</sub> levels by 20 percent and SO<sub>2</sub> levels by 39 percent by 2010.

To get Guangdong officials to agree to begin talks on an emissions trading system, Liao said, Beijing had to give its permission and it has now done so.

### **53. Thick Smog Shrouds Hong Kong, Health Warning Issued**

Thick smog blanketed Hong Kong in early September, a clear sign that the territory and southern China are still a long way from cleaning up their bad air. The government urged people with respiratory problems to avoid heavily congested traffic areas and cut back on outdoor physical activity. Pollution levels were worst in the central business district, home to many local and international companies. The light brown haze blotted out the city's famous Victoria Harbor and skyscrapers loomed like ghosts in the tepid morning light.

The air pollution index hit 118 in the central business district just before midday, an official at the Environmental Protection Department said. It was almost as bad in the densely populated shopping belts of Mongkok and Causeway Bay.

Government officials said the pollution was from local factories, vehicles and China's fast-growing Pearl River Delta. Typhoon Sinlaku, which was churning closer to southern China, also affected local weather patterns.

"The air typically hangs still just before the arrival of typhoons, and this traps the air pollutants and they cannot disperse," the environment department official said.

Hong Kong's air pollution problem has grown steadily worse in recent years, caused in part by the territory's large fleets of diesel-powered vehicles and rapid economic growth in China's Guangdong province, just north of Hong Kong.

Business executives have stepped up pressure on Hong Kong's government to clean up the bad air, which they say is turning off potential investors and

foreign talent who might otherwise want to relocate and work here. Authorities in Hong Kong and southern China have repeatedly said they would tackle cross-border pollution but few concrete measures have yet emerged.

### **54. Tokyo Diesel Retrofit Program Expands**

The greater Tokyo area, representing more than half of the Japanese economy, will begin enforcing strict regulations on diesel powered motor vehicle use, in effect banning all currently driven trucks and buses unless they are equipped with diesel particulate filters (DPFs). The scheduled area-wide regulations came after the assembly of Kanagawa Prefecture, one of the provinces surrounding Tokyo together with Saitama and Chiba, enacted an ordinance for that province on September 24<sup>th</sup> that will regulate diesel vehicles. The greater Tokyo-area provinces formed an alliance to restrict the use of diesel vehicles because of serious air pollution problems resulting from emissions of oxides of nitrogen and suspended particle matter (SPM).

After a one-year notification period, the four provinces will jointly implement their diesel ordinances from Oct. 1, 2003, an official of the Tokyo Municipal Government's Environmental Bureau said Oct. 2.

Fleet owners and users of diesel powered vehicles--trucks, buses, and other commercial vehicles--that were registered before 1997 must install the DPF that is designated by Tokyo and/or the other three provinces on their diesel-powered vehicles, or switch their vehicle power trains to compressed natural gas (CNG), gasoline engines, or other power sources. The vehicles also must be certified by the cities before they can drive on public roads. Diesel vehicles

registered after 1997 can be used without DPFs but must be equipped with such filters seven years after the initial registration.

Violations are subject to a fine of up to ¥500,000 (\$4,700) per case and the public disclosure of names of companies and individuals concerned.

On Oct. 1, the Japan Truck Transport Association appealed to Tokyo Gov. Shintaro Ishihara to relax the city's regulations, complaining that the planned regulations are too stiff and costly.

### **55. Air Pollution in Delhi Improving**

Five years ago, the Indian capital was rated as one of the most polluted cities in the world, continually shrouded in eye-stinging smog of foul gas and noxious fumes. However, pollution levels in this metropolis of about 13 million people have come down significantly since the government cracked down on exhaust-belching vehicles and closed down smoke-spewing factories in the late 1990s.

"There has been a 25 percent reduction in pollution levels since 1995. Sulphur dioxide in the air is within prescribed limits and suspended particulate matter has also come down," said Dilip Biswas, chairman of the Central Pollution Control Board. "Now you can see the stars at night".

The average suspended particulate matter, which is the main cause of the thick haze that once hung over the city, dropped to 347 micrograms per cubic meter in 2001 from 405 micrograms the previous year, says the Central Pollution Control Board. Sulphur dioxide levels also fell to 14 micrograms from 18 micrograms while nitrogen dioxide dipped to 34 micrograms from 36 during

this period.

The cleanup, prodded by orders from the country's highest court, kicked off in 1996 when the government ordered thousands of chemicals and textile factories to close. But the campaign gained pace when the government phased out commercial vehicles older than 15 years in 1998 and then ordered all public transport - including taxis, buses and three-wheelers - to switch to compressed natural gas (CNG). Delhi, which lacks a local rail network, relies on a fleet of about 12,000 buses, 65,000 taxis and three-wheelers for transport.

Today, about 6,000 buses have changed from diesel to CNG and thousands of three-wheelers have also adopted the cleaner fuel.

Delhi had just a few thousand cars and buses about 30 years ago and the word "pollution" was not in the local vocabulary. But as the number of vehicles rose to 3.3 million at the end of 1999 from 1.8 million in 1981, New Delhi was smothered in black clouds of smoke spewing from old cars and lumbering trucks hauling huge loads which choked up main roads during rush hour. Government statistics show there are currently 3.6 million vehicles in the Indian capital.

## **MIDDLE EAST**

### **56. Electric Fuel in Israel Gets US Funding For Bus Program**

Israel's Electric Fuel Corp said yesterday it received approval from the U.S. Federal Transit Administration (FTA) to fund at least half of its Zinc-Air Electric Transit Bus Program. The program was initiated in 1998 to enable Electric Fuel to use its zinc-air fuel cell system to power a full-size, all-electric transit bus that would provide a full day's

range for heavy-duty city and suburban routes regardless of the weather.

Electric Fuel said in a statement that the FTA will give at least \$1 million for the next phase of the program, which will include an evaluation of the performance of zinc-air battery propulsion systems for transit buses and the implementation of an advanced control system.

Electric Fuel's partners in the program, led by General Electric Global Research, will fund the rest of the \$2 million cost.

The Regional Transportation Commission of Southern Nevada will also continue to be involved in the project.

The zinc-air test program is aimed at enabling all-electric buses meeting transit bus standards including performance, speed, acceleration and hill climbing.

## LATIN AMERICA

### **57. Venezuelan State Oil Firm to Cease Distribution Of Two Leaded Gas Types**

In the second phase of a policy ultimately intended to eliminate leaded gas from the Venezuelan market, the state petroleum company, Petroleum of Venezuela (PDVSA), will cease distributing two of the three grades of leaded gasoline on September 15<sup>th</sup>. The move is part of the government's drive to cut air pollution from lead and other airborne substances.

Currently, Venezuelan gas stations, which are all supplied by PDVSA, sell four kinds of gasoline for automobiles: 95 octane unleaded gas and three kinds of leaded gas: octanes 87, 91, and 95.

Unleaded gas accounts for only 12 percent of gas sales by volume.

The change will leave two classes of gasoline for automobiles, the 95 octane unleaded gas and 91 octane leaded gas. PDVSA expects unleaded gasoline sales to rise 13 percent, to constitute 25 percent of gasoline sales volume. Other grades of leaded fuel will remain available for airplanes and other non-automobile users.

The first phase of the policy to eliminate leaded gas was begun in 1999 by presidential Decree No. 638, which stipulated that all automobiles from model year 2000 onward--whether built in Venezuela or imported into the country--had to use unleaded gasoline and be equipped with catalytic converters. Venezuela permits importation of new automobiles only. In May, President Hugo Chavez instructed PDVSA to reduce the gasoline supply to two types.

PDVSA plans to completely eliminate leaded gas from the domestic market, but that will not be possible until the nation's refining capacity for unleaded gas is sufficiently increased, sometime in 2005 or after.

### **58. Local Colombian Agency Unveils Program To Cut Auto, Industrial Emissions**

The environmental agency for the city of Cali, Colombia, announced Aug. 14 that it will implement a 646 million peso (\$240,000) network to monitor and improve the city's air quality. The monitoring program will be carried out over the next two months by the city's Administrative Department of Environmental Management (Dagma) in conjunction with scientists from la Universidad del Valle. Dagma will use the new system to pinpoint sources of

vehicle and industrial air pollution in the area and to focus enforcement efforts on major offenders.

The network is made up of eight fixed stations located in different parts of the city, equipped with monitors to measure particles, sulphur oxides, nitrogen oxides, carbon monoxide, and ozone. Four of these stations are equipped to measure meteorological conditions--such as velocity and direction of winds, relative humidity, barometric pressure, and solar radiation.

Dagma's main concerns are the effects of the growing number of private vehicles in the city, which have risen at twice the rate of population growth since 1998. According to previous Dagma studies, motor vehicles cause 70 percent of air pollution in Cali. One of the reasons vehicles account for so much of the city's air pollution is the high percentage of vehicles manufactured before 1981 that ply the city's roads. Nearly a third of all cars in Cali were built before 1981, and most of them do not have catalytic converters.

Under municipal Decree No. 948 issued in 1995, owners of vehicles that exceed permitted emission limits must pay fines equal to up to 30 months' wages--that is, up to \$6,000. For repeated offenses, vehicle owners are subject to suspension of their driver's licenses. But this decree is not strictly enforced. One of the purposes of the study is to highlight the problem in order to pressure city authorities to crack down on offenders. The city's traffic police are responsible for enforcing the decree.

### **59. Clean Air Projects Seen As Growth Market In Brazil**

Brazil may generate clean air energy projects worth hundreds of millions of dollars in the fight to reduce global

warming. The Kyoto pact aims to cut emissions of greenhouse gases, such as carbon dioxide and methane. Industrialized country members must cut their emissions by an average 5 percent between 2008-2112. Those unable to do so can buy carbon credits from countries, such as Brazil.

"Carbon credit trading is 4 to 5 times greater this year than expected," Nuno Cunha e Silva, Director of EcoSecurities told Brazil's 2nd Clean Energy Forum in Rio de Janeiro, adding that he expected global turnover to reach \$10 billion by 2005. Silva said there were small scale biomass, wind and solar energy projects, as well as reforestation and urban waste energy schemes being prepared in Brazil.

The first Brazilian project financed by the World Bank's Prototype Carbon Fund was signed this month. The Plantar pig iron project in Minas Gerais state involves the substitution of local charcoal for imported coke as an energy source in the steel production process. By using charcoal produced from nearby eucalyptus plantations, the project avoids air pollution caused by burning coke and also generates 4,000 jobs.

A couple of additional renewable energy projects in Brazil's two largest cities, Sao Paulo and Rio de Janeiro, are likely to be finalized later this year. Burning methane gas seeping from urban waste landfills can generate power and replace the burning of additional fossil fuels. Brazil's Koblitz company started up a 10 MW wood-waste fired electricity power station at Piratini in Rio Grande do Sul late last year. The 10 million reals (\$2.9 million) power plant is supplied with wood-waste by local sawmills logging industrial pine plantations.

### **GENERAL**

## 60. Earth Summit Reaches Limited Agreements

Nearly 200 countries agreed in principle to a U.N. plan to cut poverty while saving the environment. Key elements of the agreement are summarized below.

- **WATER/SANITATION.** Agreed to halve proportion of people without access to proper sanitation by 2015, a goal Washington had resisted. Complements previous goal of halving proportion of people without access to clean drinking water by 2015.
- **ENERGY.** Agreed to take actions to improve access to affordable energy but failed to agree on specific targets to increase share of world energy produced from renewable sources such as solar or wind power.
- **FISH.** Agreed to restore depleted fish stocks by 2015 at the latest, recognizing oceans are essential to ecosystem and a critical source of food, especially in poor countries.
- **CHEMICALS.** Agreed that by 2020 chemicals will be made and used in ways to minimize severe harmful impact on humans and the environment. Will promote sound management of hazardous waste.
- **HEALTH.** Agreed a World Trade Organization accord on patents should not prevent poor countries providing medicines for all, a key issue as they often cannot afford AIDS drugs.
- **WOMEN.** Access to healthcare should be consistent with basic human rights as well as religious and cultural values.
- **AID.** Recognizes substantial increase in aid needed for poor countries to meet agreed development goals. Urges rich countries to give 0.7 percent of national income, a target first set in 1970. Only five countries have reached that level.
- **GLOBALISATION.** Plan acknowledges globalization has both good and bad sides. While it offers great opportunities for growth of the world economy and better living standards, poor countries face special difficulties and should be included.
- **TRADE.** Bolsters trade and environment without saying that World Trade Organization rules override global environmental treaties. Wealthy countries reaffirmed will to lower trade-distorting subsidies.
- **BIOLOGICAL DIVERSITY.** Agreed to cut significantly by 2010 the rate at which rare animals and plants are becoming extinct.
- **GOVERNANCE.** Recognize good governance nationally and internationally is essential for sustainable development.
- **STRATEGIES.** Countries agreed to initiate strategies to preserve resources for future generations by 2005.
- **POVERTY.** Agreed to establish a solidarity fund to wipe out poverty, "the greatest global challenge facing the world today". Stressed that contributions to fund are voluntary.
- **PRECAUTIONARY APPROACH.** Reaffirmed principle to act to protect the environment even if evidence of potential future damage to Earth's ecosystem is not conclusive.

- COMMON BUT DIFFERENTIATED RESPONSIBILITY - Reaffirmed all nations must try and save planet but rich countries are expected to shoulder more of the financial burden than poor nations.

### **61. China, Russia Announce Support For Kyoto Protocol**

During the Worldwide Summit For Sustainable Development, both Russia and China gave their backing for the Kyoto protocol.

Russian Prime Minister Mikhail Kasyanov told the Earth Summit he expected Moscow to ratify the Kyoto Protocol on global warming soon. Russian ratification would virtually ensure the treaty is implemented despite its rejection by the United States.

"Russia has signed the Kyoto Protocol and we are now preparing its ratification. We consider that ratification will take place in the very nearest future," Kasyanov said to a plenary session of the U.N. worldwide summit meeting. The treaty has been passed to the Russian parliament.

China, the world's second biggest polluter, had earlier told the U.N. meeting it had ratified the agreement but, as a developing country, China is not bound by any emission reduction goals.

"I would like to announce hereby that the Chinese government has ratified the Kyoto protocol," Premier Zhu Rongji told delegates at the meeting.

### **62. IEA Predicts Massive Increase in Energy Use, Greenhouse Gases Over Next 30 Years**

A significant increase in energy use projected for the coming 30 years will have a similar upward impact on emissions of carbon dioxide unless governments in the industrialized and developing nations make good on promises to reduce the consumption of fossil fuels, according to a new report released by the International Energy Agency Sept. 21. In World Energy Outlook--2002, the IEA estimated 1.7 percent annual growth in energy demand over the coming 30 years. The projection, which forms the key assumption behind the base reference scenario in the study, means that the world will be consuming two-thirds more energy in 2030 than it does today.

The outlook--a study of trends in energy supply and demand, prices, trade, and carbon emissions published every two years--predicts that fossil fuels will remain the dominant source of energy for the coming three decades, filling more than 90 percent of new demand but also leading to ongoing worsening of the global environment. While the outlook projects that renewable energy--especially wind power and biomass--will increasingly contribute to power generation over the coming 30 years, ever-growing demand in the electricity and transport sector--especially in the developing world--will exacerbate trends toward higher greenhouse gas emissions.

In the outlook's reference scenario--which takes into account energy-efficiency or environmental policies and measures adopted to date--energy-related carbon emissions actually grow slightly faster than energy use as a whole, by about 1.8 percent annually. This growth will see carbon emissions rise to about 38 billion tons by 2030, representing 16 billion tons more CO<sub>2</sub> in the atmosphere, or about 70 percent above today's level, IEA said.

The lion's share of new emissions will come from developing countries, slated to become the world's leading energy consumers by 2030, according to the report. Developing countries will see their share of carbon emissions rise from today's 34 percent to 47 percent by 2030, while the industrialized countries belonging to the Organization for Economic Cooperation and Development will see a corresponding decrease from today's 55 percent to 43 percent in 2030. The geographic distribution will be marked by trends such as increasing energy use in Asia, with China alone expected to add 3.6 billion tons of new emissions by 2030.

Recognizing that policies evolve over decades, the IEA's new outlook also contains an "Alternative Policy Scenario" in which the 30 industrialized countries of the OECD achieve extensive cuts in carbon emissions, particularly through the use of renewable energy sources in electricity generation, energy conservation, new technologies, and carbon sequestration.

### **63. Automakers Call for Global Harmonization Of Vehicle Requirements; Push Clean Diesels**

The top officials of 13 European, Japanese, and U.S. auto and light truck manufacturers and representatives of several leading automobile manufacturing associations Sept. 27 called for global harmonization of technical requirements for motor vehicles, which they said would improve safety and protect the environment. At their groundbreaking Global Automotive Industry Meeting, chief executive officers from the companies and other industry representatives said that harmonization of regulations should move forward under the framework of the 1998 United Nations Economic

Commission for Europe Agreement.

Under this United Nations-supervised legal instrument, also known as the Parallel Agreement, the European Union, Japan, and the United States agreed to work toward mutual recognition and acceptance of standardized technical requirements for cars.

"Participants agreed that the international automobile industry should strive for the earliest possible establishment of Global Technical Regulations," the CEOs said in the statement at the conclusion of their meeting.

The CEOs were in Paris for the Sept. 28-Oct. 13 Paris Auto Show, one of the main forums for showcasing new vehicles and technologies.

Along with their call for international harmonization, the CEOs agreed to work toward convergence for environmental progress in the area of "clean diesel technology." The CEOs agreed that current diesel engines are "dramatically more efficient than conventional gasoline engines, in terms of both fuel economy and carbon dioxide emissions" and thus "have the potential to meet stringent requirements regarding local emissions."

CEOs pledged to expedite market penetration of everything from hybrid vehicles, clean diesels, fuel cells, and hydrogen combustion engines--essentially all the technologies on display in the car show's massive alternative fuels exposition hall--by increasing "support for technical innovation and needed infrastructure, improving the quality of available fuels, particularly sulfur-free fuels, and convincing consumers to adopt these vehicles in large numbers."

Below are some details of what the top manufacturers have accomplished so far:

**D. General Motors Corp (U.S.)**

GM recently decided to scrap its most efficient U.S. gasoline models, the Chevrolet Metro and Chevrolet Prizm. It has also halted production of its EV1, the world's first mass-produced electric car. GM says it spends more than \$1 billion annually on fuel-cell technology, partly through a host of joint ventures, but does not expect many fuel-cell cars to reach highways before 2010. In Paris, GM displayed the Hy-Wire fuel-cell prototype, which uses electronics to operate the car instead of cables. It aims to bring out a hybrid electric-petrol full-size pick-up truck in its domestic market in 2004, which will cut fuel consumption by 10 to 15 percent.

**E. Ford Motor Co (U.S.)**

Ford's Fiesta model in Europe, with a direct injection engine developed with Peugeot, gets 27 kilometers per liter of diesel out of town, putting it in the top flight of fuel-efficient carmakers. But a cost cutting drive aimed at ending hefty losses at the number-two automaker has prompted Ford Chairman Bill Ford Jr to say that further efforts to cut greenhouse gas emissions "will be tempered by our near-term business realities." Ford is closing its Think Norwegian electric car venture, in which it had invested \$100 million, due to disappointing sales. It has brought out several fuel-cell concepts in the last two years and is working with Ballard Power Systems on further ones, though it sees production vehicles as a long way off. A

hybrid version of its Escape compact SUV is due out late next year.

**F. Toyota Motor Corp (Japan)**

Toyota's Prius hybrid, which went on sale in 1997, travels 31 kilometers per liter of fuel, making it possibly the world's most efficient five-seat car in production. Toyota and Honda are both racing to be the first automakers to put a fuel-cell passenger car on the market by the end of the year, though only a few would be sold, on a lease basis, to government bodies, research institutions and energy companies. Toyota says it does not expect full commercialization of fuel-cell cars until 2010 at the earliest.

**G. Renault Sa, Nissan Motor Co (France, Japan)**

Renault's most fuel-efficient car is the Clio 1.5-litre DCi, which can travel 23.8 kilometers per liter of fuel. At the Paris show, Renault displayed hybrid and pure electric versions of its Kangoo minivan, which will go on sale in October and is produced in relatively small volume. In 2000, Renault and Nissan launched an 800-million-euro joint fuel-cell program. Nissan has brought forward its goal of selling fuel-cell cars to 2003 from 2005. Renault says it hopes to industrialize them in 2010. Nissan lost a lot of face recently when it asked Toyota to supply it with hybrid systems for at least 10 years for an undisclosed fee.

**H. DaimlerChrysler Ag (Germany, U.S.)**

Its most fuel-efficient car is the Smart CDI, which travels 29.4 kilometers per liter of fuel. The company estimates it will have spent \$1 billion in the 14 years to 2004 on developing fuel-cell technology. It has produced five "Necars" (New Electric Cars) since 1994 using various fuel-cell technologies. Its Chrysler arm has developed a "Natrium" fuel-cell car, which stores hydrogen as sodium borohydride, a non-toxic solution similar to soap. The company will produce a limited number of fuel-cell buses from next year and wants to be selling cars using the technology from 2004 but company officials say they expect the traditional internal combustion engine to be with us for another 30 years.

#### **I. Volkswagen Ag (Germany)**

A pioneer in fuel-efficient direct-injection diesel engines. Its Lupo 3L can travel 33 kilometers on one liter of fuel. The company has also demonstrated a prototype bullet-shaped car that can travel 100 kilometers on a liter of fuel, though the car will not go into production. A fuel-cell-powered VW Bora crossed the Alps in January, but the firm says fuel-cell cars probably won't hit the market before 15 to 20 years. The company does not have its own fuel cells, but uses those developed by a Swiss research institute. VW is concentrating on intermediate solutions first, such as synthetic fuel and biomass, or agricultural waste converted into fuel.

#### **J. Psa Peugeot Citroen (France)**

PSA's least-polluting mass-produced car

is the Citroen C3 equipped with the same 1.4-liter diesel engine as Ford's Fiesta. The vehicle emits 110 grams of carbon dioxide per kilometer. European industry target is a maximum 140 grams by 2008. Europe's number-two automaker aims to be selling so-called "minihybrid" cars early next year, using an electric motor to accelerate from standing in crowded town centers, cutting fuel use by between seven and ten percent. In Paris PSA showed off its latest fuel-cell ideas with the H2O, a concept spin-off of its Peugeot 206, adapted for fire brigades, which makes hydrogen chemically on board.

#### **K. Honda Motor Co Ltd (Japan)**

Leads the race among large automakers for fuel economy in mass produced cars. The aerodynamic Insight two-seater hybrid boasts 35 kilometers per liter. Also sells a hybrid version of its Civic model, which can travel 29.5 kilometers per liter. Honda's fuel-cell car to be released soon will use a fuel-cell stack developed by Ballard Power Systems, though it hopes to have its own stack ready before long.

#### **L. Bayerische Motoren Werke Ag (Germany)**

BMW believes that hydrogen powered internal combustion engines are, for now, more practical than electric motors powered by hydrogen fuel cells. It has developed a prototype of its 7-Series using that technology and hopes to introduce a limited number of cars using it in five years' time. Further production would depend on how quickly a hydrogen filling station network is developed.

#### **64. First Meeting Of The Partners Of The Partnership For Cleaner Fuels And Vehicles For Cleaner Air Scheduled**

The first meeting of the partners of The Partnership For Cleaner Fuels And Vehicles For Cleaner Air is scheduled to take place at UN headquarters in New York on 14/15 November 2002.

On the first day, Thursday 14 November, the meeting will focus on the objectives and operating modalities of the Partnership itself, while at the second day, Friday 15 November, it will focus on activities. Possible outcomes of the meeting are agreement on working modalities as well as a draft work plan.

The principle objectives of the Partnership include:

- Help developing countries to develop action plans to complete the global elimination of leaded gasoline and start to phase down sulphur in diesel and gasoline fuels, concurrent with adopting cleaner vehicle requirements;
- Support the development and adoption of cleaner fuel standards and cleaner vehicle requirements by providing a platform for exchange of experiences and successful practices in developed and developing countries as well as technical assistance;
- Develop public outreach materials, educational programs, and awareness campaigns; adapt economic and planning tools for clean fuels and vehicles analyses in local settings; and support the development of enforcement and compliance programs, with an initial focus on fuel

adulteration.

- Foster key partnerships between government, industry, NGOs, and other interested parties within a country and between countries to facilitate the implementation of cleaner fuel and vehicle commitments.

Michael Walsh has agreed to serve as moderator for the two days.

Members of the Partnership are listed below.

#### **Industry:**

- Alliance of Automobile Manufacturers
- American Honda
- American Petroleum Institute
- Association of International Automobile Manufacturers
- Association of Emission Control by Catalyst
- BP
- Engine Manufacturers Association
- International Truck and Engine
- International Fuel Quality Center
- Manufacturers of Emission Control Association
- Shell - US

#### **Environmental NGOs:**

- Natural Resources Defense Council
- Global Environment and Technology Foundation
- Alliance to End Childhood Lead Poisoning

#### **Countries:**

- Canada
- Chile
- Central American Commission on Environment and Development (7 Central

American companies:  
(Costa Rica, Panama,  
Nicaragua, El Salvador,  
Honduras, Guatemala,  
Belize)

- Italy
- Mexico
- Netherlands
- South Africa
- US
- China

#### International Organizations:

- UNEP
- UN Department of Social and Economic Affairs
- Pan-American Health Organization -- PAHO

#### 65. Appendix A: The Automotive Industry in China – A Brief Overview

##### M. FAW Group Corporation

China First Auto Works (FAW) Group was the first large-scale motor vehicle production base in China with headquarters in Changchun. As one of the top ten industrial enterprises in China, its production capacity is 700,000 vehicles a year. In 2000 the total motor vehicle output of the FAW Group was 423,000, the highest in China's automotive industry. The FAW Group produces mini and light-duty buses and trucks, medium-size and heavy trucks, cars, and other series. Its JieFang series buses and trucks constitute a large share of the market, and its Red Flag limousines were the first domestically produced luxury cars. The FAW Group also has entered into a joint venture with Volkswagen to produce Jetta and Audi sedans. Over the next

five years the FAW Group is seeking to achieve a production capacity of 1 million vehicles, with a total sales volume of RMB (\$10 billion).

FAW and Tianjin Automotive Industry Group Corp. (TAIC) jointly announced a merger agreement on June 14, 2002,<sup>5</sup> with FAW controlling 51 percent of Xiali Auto. In addition, TAIC will also transfer to FAW its 75 percent equity shares in the Tianjin Huali Automobile Co., Ltd., a mini vehicle manufacturer. The acquisition of Xiali and Huali gave FAW, the only missing segment in its vehicle portfolio: low-end sub-compact economy cars. As China's leading minicar and mini-vehicle manufacturers, Xiali and Huali brought to FAW not only two domestic brands, but also their national sales and distribution network. The acquisition of Xiali Auto gave FAW all the tangible and intangible assets needed to enter the economy car segment with the least capital, time and risks. The Huali mini vehicles will be a complimentary addition to FAW, which moved into this sector a couple of years ago with its Jiabao minivan series. The newly developed Huali mini MPV model, the Happy Courier, is a competitive product compared with market leaders such as the Songhuajiang Zhongyi and Chang'an Star. FAW will also be able to utilize the 30 or so parts and components joint ventures TAIC established with Toyota.

Zhu Yanfeng, FAW's president repeatedly mentioned in the past few years that the group strongly believed in the growing demand for family cars in China and said that it would produce cars with engine displacement of around 1.3 liters, priced around ¥80,000. They now have that capability.

<sup>5</sup> According to CBU-Auto, June 27, 2002, Vol. 8, No. 21

Perhaps most importantly from a strategic standpoint, the acquisition of Xiali and Huali means FAW will automatically become Tianjin-Toyota Automobile Co., Ltd.'s second largest shareholder. In terms of cooperation with multinational automotive corporations, FAW seemed to be lagging behind both SAIC and DongFeng (see below). Despite the successful cooperation with Volkswagen in the passenger car market, FAW has been actively looking for a second heavyweight partner to upgrade its truck business on the one hand and to avoid being controlled by a single foreign partner. The acquisition of TAIC's Xiali and Huali assembly projects gives FAW the opportunity to enter into an all-round relationship with Toyota and its affiliates, including Hino, Daihatsu and Denso. Such cooperation could potentially cover FAW's entire line of vehicles and help elevate FAW's competitiveness in terms of product, technology, management and sales and distribution. FAW's heavy-duty trucks and the Red Flag sedan, in particular, are in need of a technology upgrade.

According to CBU, Japanese media reports that "Hino and Daihatsu are in active talks with FAW in setting up joint ventures to assemble trucks and commercial vehicles." The FAW-TAIC merger could become a foundation stone for an alliance between FAW and Toyota. (See discussion earlier.)

#### **N. DongFeng Motor Corporation (DMC)**

Originally named the Second Automobile Works, DMC has its headquarters in Shiyan City, Hubei Province. At present, DMC has three major production bases—Shiyan, Xiangfan, and Wuhan—which form the

Hubei automotive industry corridor. In 1998 DMC produced 190,000 vehicles, mainly heavy-duty trucks, medium-size trucks, and light-duty trucks. Under a joint arrangement with the Citroën Corporation of France, it also produces Fukang sedans. DMC is playing the leading role in achieving Hubei Province's goal of "building up a one million vehicle production base."

Beyond Hubei, it has taken steps to expand further by joining with Honda and Denway Motors in a venture to produce Honda cars in Guangzhou for export.<sup>6</sup> It is also in final negotiations of a deal with Renault-Nissan.<sup>7</sup>

#### **O. Shanghai Automotive Industry Corporation (Group)**

Shanghai began to manufacture cars in the 1960s, but on a very modest scale. In the 1980s it entered into a joint venture with Volkswagen of Germany to produce Santana sedans. By 2000 its production capacity had reached 400,000 vehicles and accounted for 45 percent of China's car market, with its profit exceeding the sum of that of all other automakers combined. As a result of a joint venture with General Motors, Buick Century sedans began coming off the assembly line at the end of 1998. The Shanghai Group also plans to develop its production of heavy-duty trucks, large buses, and light-duty vehicles. As of 2002 the Shanghai Group had established 44 joint ventures with global automotive companies.

<sup>6</sup> "Honda Aims to Export Cars From China", Wall Street Journal, July 11, 2002.

<sup>7</sup> According to CBU-Auto, June 27, 2002, Vol. 8, No. 21

**P. China National  
Heavy-duty Truck  
Group (NHDTG)**

NHDTG, the largest heavy-duty truck production group, mainly produces Steyr 91 series complete trucks, bus chassis, and engines for Germany's Mann Corporation, as well as transmissions, axles, and other products. In 1998 the group's total output was almost 9,000 trucks, and the company has set a production goal of 25,000 vehicles. In 2001 the group signed an agreement with Sweden's Volvo Corporation to commence production of heavy-duty vehicles.

**Q. Joint Venture Partners**

Over the past few years, foreign companies have increased their participation in China's automobile industry. The current status of each major joint venture partner is summarized in this section.<sup>8</sup>

*i. General Motors Corporation*

Since 1989, General Motors, the world's largest automobile manufacturer, has invested about \$ 2 billion in China to set up three vehicle joint ventures—Shanghai GM, Shenyang Gold Cup GM, and Liuzhou Wuling Motor Company—and one solely funded accessory sales center. General Motors has successfully brought a series of its products into China, including the Buick sedan, the

Buick GL8 for business, the Sail family car, Chevrolets, and pickup vehicles. Because it plans to turn Shanghai GM into its production base in Asia, General Motors has provided the Pan Asia Technical Automotive Center in Shanghai with major support. GM's overall production of the Buick Century, Buick GL8, and the Sail climber to 59,729 in 2001 in 2001.<sup>9</sup>

*ii. Ford Motor Company*

Ford, which was the first American automobile manufacturer to enter the Chinese market, in June 1978, currently has in China more than 10 sales agencies, over 40 service facilities, and 2 global accessory sales agencies, as well as a technology training center. Its Transit vehicle, co developed with Jiangling of China, is now in production. Moreover, it has obtained the Chinese government's approval to set up a joint venture with Chang An Automobile in Chongqing to put out a small family car priced at about RMB100, 000 (\$ ).

Currently, Ford-brand vehicles control 0.5 per cent of the Chinese auto market share, according to the company.<sup>10</sup> Chang'an Ford is Ford Motor Co's first passenger car joint venture with Chang'an Motor Corp based in Chongqing in Southwest China. Ford Motor will introduce a family-sized sedan, which is based on its Fiesta platform developed in Europe, into the 50/50 joint venture. The Chinese Government approved the US \$98-million joint venture during the first half of last year.

In preparation for selling both vehicles that it will produce and imported Ford-

<sup>8</sup> This section is based on a three-part series of articles entitled "World Automobile Giants' China Strategies in 21st Century" that appeared in January 2001 in the online version of China's *People's Daily* (*People's Daily*, 2001).

<sup>9</sup> "Honda Aims to Export Cars From China", Wall Street Journal, July 11, 2002.

<sup>10</sup> Xinhua, (06/18/2002)

brand autos, the joint venture has selected 25 franchised dealers in China. Ford Motor Co said earlier that it also plans to set up an auto financing branch to serve local consumers before the first product launch of the joint venture.

The company has exported around 1,500 vehicles to China so far this year. The company's exports to China this year will focus on the Mondeo Ghia-X produced in Taiwan Province.

The company also controls a 30 per cent stake in a joint venture in East China's Jiangxi Province, which produces Ford's Transit commercial wagons. The price of the Transit series light van made by Jiangling Motors Corp. were slashed by ¥20,000 beginning April 10, with the exception of the 17-seat high roof model which was reduced by ¥10,000.<sup>11</sup>

#### *iii. DaimlerChrysler*

Sales of DaimlerChrysler's Chinese product, the Beijing Jeep, declined throughout the 1990s, revealing the need for urgent technological improvements. On September 27, 2000, together with Beijing Automotive Industry Group, DaimlerChrysler declared that it would invest an additional \$226 million to strengthen and expand production in China. DaimlerChrysler also has joined hands with Yaxing-Benz (Yangzhou) in bus production, obtained approval to manufacture trucks in Baotou, Inner Mongolia, and signed a technology transfer agreement with Ankai Auto (Anhui) to produce a luxury car.

It continues to produce the Jeep Cherokee in Beijing with total production

in 2001 only 4,258.<sup>12</sup>

#### *iv. Volkswagen*

Shanghai-Volkswagen was established in 1985 and FAW-Volkswagen in 1991. Since then, the two ventures have sold more than 300,000 vehicles a year, maintaining their market share of over 50 percent. Volkswagen is trying to gradually stagger the products of its two ventures. The First Automobile Works (FAW, Changchun) put out the Audi A6 (C class) in 1999, with the Bora (A class) in 2001 and mini cars (A class) in 2004. Similarly, Shanghai produced the Passat (B class) in 2000, and family cars (A Class) are to be launched in 2002.

In China all these models almost keep pace with the international market, and, when completed, the Volkswagen joint ventures will manufacture the top five models, based on overall production, in China. In addition, Volkswagen is studying the possibility of developing a new model to be sold in both China and overseas markets, and it may choose China as the base for export production. Volkswagen intends to introduce its most advanced manufacturing techniques and product technologies into China, and bring its two Chinese ventures, as well as accessory systems, into its global orbit of purchasing, product research and development, and marketing.

Volkswagen, then, has established a strong platform in China for manufacturing future products. In 15 years Volkswagen invested substantially in China, including support for upgrading equipment and expanding production capacity so that FAW-Volkswagen and Shanghai-Volkswagen are able to

<sup>11</sup> CBU-AutoEnews, Vol. 3, No. 13, April 18, 2002

<sup>12</sup> "Honda Aims to Export Cars From China", Wall Street Journal, July 11, 2002.<sup>12</sup>

maintain their competitive edge.

Volkswagen remains far and away the strongest producer of cars in China with total production of 412,127 in 2001.<sup>13</sup> Shanghai Automotive Industry Corp. with Volkswagen AG signed an agreement on April 12 to extend their joint venture, Shanghai-VW Automobile Co., Ltd., for another 20 years to 2030, according to a recent report.<sup>14</sup> The total registered capital of the joint venture will increase to ¥6.3 billion from the current ¥4.6 billion.

*v. PSA Peugeot-Citroën Group*

PSA began to enter the Chinese market in the late 1980s. For various reasons, its sedan project in Guangzhou produced only 100,000 cars in 10 years. Then PSA withdrew its funds, resulting in the total collapse of the project, which will be taken over by Honda (see later section on Honda). PSA's Shenlong-Citroën joint venture with Dongfeng Motor Corporation also experienced many setbacks, including the 10 full years required to commence operations. In September 2002 Shenlong added RMB3.41 billion (\$ ) to its registered capital via a RMB2.34 billion (\$ ) debt-to-equity transfer, bringing total capital to RMB6 billion (\$ ). Meanwhile, the French shareholders of Citroën added an amount that kept its share at 30 percent; Dongfeng's share declined to 31 percent. In 2001, Citroën's Fukang (ZX) and Picasso models led the company to being the third largest car producer with 53,680 units.<sup>15</sup>

<sup>13</sup> "Honda Aims to Export Cars From China", Wall Street Journal, July 11, 2002.<sup>13</sup>

<sup>14</sup> CBU-AutoEnews, Vol. 3, No. 13, April 18, 2002

<sup>15</sup> "Honda Aims to Export Cars From China", Wall Street Journal, July 11, 2002.

*vi. Renault*

Renault and the Sanjiang Group in Hubei Province joined forces in 1993 to assemble a light bus, Trafic. Production was suspended because of poor sales after the venture sold a total of 4,906 Trafic vans in the past seven years. Renault also has talks under way with Beijing Automotive Industry Group about producing the "Scenic" sedan and with Dongfeng Motor Corporation on trucks. As noted above, DFW is reportedly in final negotiations of a deal with Renault-Nissan.<sup>16</sup>

*vii. Toyota*

Japan's biggest auto corporation, Toyota, had plans to produce automobiles in Tianjin in 2002. Its Xiali, co produced by the Daihatsu and Tianjin Auto Group, had dominated China's taxi market. However, in the three years from 1999 to 2001, TAIC's car market share in the country came down drastically from 18.5 percent to below 10 percent. Xiali had been steadily losing its market share with taxi fleets as large and medium cities are choosing larger taxi models. The availability of other sub-compact cars such as the Yueda-Kia Pride, the Nanya Eagle and the SAIC-Qirui Chery also took customers away from the older Xiali model. In the higher end, the successful promotional activities of the Buick Sail, even though launched six months later than the Xiali 2000, overshadowed TAIC's new launch, the Xiali 2000, which sold only 10,000 units in 2001 compared to the impressive 28,000 units of the Sail. TAIC's burdensome and in-efficient corporate structure and debt-ridden financial situation prevented it from launching any new products. And TAIC's partner, Toyota Motor Co., reportedly became doubtful about the

<sup>16</sup> According to CBU-Auto, June 27, 2002, Vol. 8, No. 21

future of the cooperation.

As noted above, the merger between TAIC and FAW has formed the basis for a much stronger relationship between Toyota and FAW. (See discussion earlier)

Toyota's longer term plan is to build the entire Toyota series in China some day. Toyota believes that Tianjin, Shanghai and Changchun all have solid industrial facilities and ample supply of raw materials and parts and components. In terms of labor, Tianjin has a very qualified industrial work force and labor cost is cheap and it is in close proximity to Beijing, China's largest car market.

#### *viii. Honda*

Honda's well-known motorcycle engine technology has earned it an important position in China's motorbike market. Its other success is Guangzhou Honda, which will produce a new model each year, including a new mini car. Guangzhou Honda has stated its intention to raise its annual production of Accords from 30,000 to 50,000 units by 2002. In fact, it already exceeded that level in 1991, producing 51,116 Accords. Honda has also announced that it plans to build a factory in China where it will make cars exclusively for export to markets in Asia and Europe.<sup>17</sup> The new plant will be located in Guangzhou and will be operated in partnership with two Chinese auto makers – Guangzhou Auto Group Corp., owned by Hong Kong listed Denway Motors Ltd. and Dongfeng Motor Corp. In the same announcement, Honda said that it plans to increase annual capacity at its existing plant to 120,000 vehicles by next March.

The Honda Odyssey, an MPV model

<sup>17</sup> "Honda Aims to Export Cars From China", Wall Street Journal, July 11, 2002.

made by Guangzhou Honda Automobile Co., Ltd., rolled off the production line on April 10. Retail price for the Odyssey is ¥298,000.<sup>18</sup>

#### *ix. Nissan*

Nissan joined Zhengzhou Light Vehicle Factory in 1994 in manufacturing pickup trucks, but output remains low. It also joined with Yulon Motor and Dongfeng to produce the Fengshen Bluebird in Shenzhen, which enjoys a ready market.

Nissan has entered into a partnership with Renault for sedan manufacture in China. Specific models and investment partners are being considered. As noted above, DFW is reportedly in final negotiations of a deal with Renault-Nissan.<sup>19</sup> But more recent reports indicate that the talks have been postponed yet again to give Dongfeng more time to cope with 30,000 lay-offs.<sup>20</sup> The negotiations formerly set for June were postponed to the middle of July, and were later put back again. The new date has yet to be decided.

The proposed joint venture is generally expected to advantage both parties. It is an important part of Nissan's "Revival Plan," which aims to expand the company's penetration of China's huge auto market. The joint company, intended to be established by the end of this year in Shiyan, Hubei Province, with Dongfeng and Nissan having equal shares, will be in production of a minibus and three passenger cars -- the Cefiro, the Sunny and the March. Production is expected to reach 150,000 units in three years.

An overburdened state-owned factory

<sup>18</sup> CBU-AutoEnews, Vol. 3, No. 13, April 18, 2002

<sup>19</sup> According to CBU-Auto, June 27, 2002, Vol. 8, No. 21

<sup>20</sup> Xinhua, (08/19/2002)

established in 1969, Dongfeng, best known for its heavy trucks and Fukang-Citroen sedans, has to undergo complete reorganization to become part of the 3 billion-yuan joint venture. The toughest problem is to cut the jobs of 30,000 people, one-third of whom will be left to find new employment themselves. In order to help reduce Dongfeng's social burden, the Shiyang city government has signed a 1.8-billion-yuan agreement to take over some 300 service firms employing 13,000 and affiliated to Dongfeng. As an old state-owned enterprise set up in the time of the planned economy, Dongfeng has had many social functions. Its service firms range from kindergartens and locksmiths to street cleaning.

Dongfeng's production and assembly factories are mostly based in Shiyang and Xiangfan cities both landlocked in the mountainous west of central China's Hubei Province, where road infrastructure is outdated. Nissan wants its proposed Chinese partner to have clear solutions to its problems before the final talks are held.

*x. Hyundai Corporation*

Early in 2000 Hyundai Corporation signed a letter of intent in the Great Hall of the People in Beijing to expand cooperation with Jiangsu Yueda Group, and on September 2000 it formally signed an agreement on transferring stock rights and making additional investment to set up a joint venture with equal shares by both sides.

In 2001, 7,715 Hyundai-Kia Pride vehicles were produced in China.<sup>21</sup>

China has picked a car made jointly with Hyundai as its preferred vehicle to

replace the capital's vast and often dilapidated taxi fleet ahead of the 2008 Olympics, state press said on Jul.23.<sup>22</sup> The vehicle in question is the mid-sized Sonata saloon, about to begin manufacture by a 50-50 joint venture of Hyundai Motor Co and Beijing Automotive Industry Corp. Although taxi operators will officially be able to choose what vehicle to use, the city government is drawing up minimum standards for the cabs, with the Sonata as "first choice", the report said. The news is a major boost for the Sonata's manufacturers, given that around 20-30 percent of Beijing's 64,000 often battle-scarred taxis are replaced every year, the report said. However it is a potentially serious blow for the joint venture set up by French carmaker Citroen (see above), a variant of whose ZX model currently comprises more than 70 percent of Beijing's taxi fleet.

*xi. Daewoo*

To qualify for sedan manufacture, Daewoo established two large ventures in China in the mid-1990s: FAW-Daewoo Automotive Engines and Shandong-Daewoo Auto Parts and Components Company. Daewoo's bankruptcy in 2000 adversely affected the two projects, as well as a bus project in Guilin. Daewoo's bankruptcy left the Shandong project, which still lacks central government approval to assemble vehicles, at a standstill.

<sup>21</sup> "Honda Aims to Export Cars From China", Wall Street Journal, July 11, 2002.

<sup>22</sup> Xinhua, 7/24/2002