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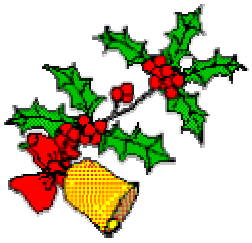
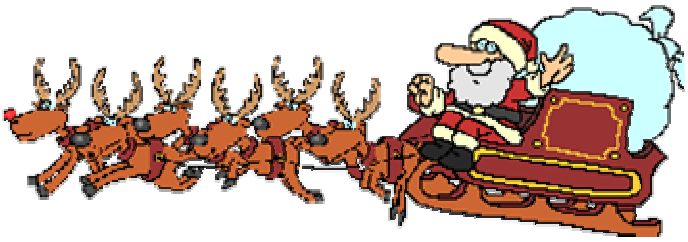
CAR LINES

Issue 2005 - 6 **December 2005**

SEASONS GREETINGS
AND HAPPY NEW YEAR TO ALL





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EUROPE

1. Germany's Upper House Passes Weak Bill To Enable Vehicle Stickers

Germany's Bundesrat, the upper house of Parliament, Oct. 14 passed a bill that would establish a system whereby stickers on vehicles would indicate particulate matter emission levels in order to enable state governments to restrict dirtier vehicles from entering certain urban areas. The legislation must now be approved by the Budestag, or lower house, to become law.

The legislation provides for a green sticker for diesel and gasoline-powered cars meeting Euro 4 emission standards and a white sticker for diesel cars meeting the Euro 2 and Euro 3 standards. Diesel cars not reaching the white sticker criteria could be subject to restriction in certain streets or areas.

The bill is a trimmed down version of a proposal submitted by outgoing Environment Minister Juergen Trittin, which would have rewarded car owners for installing filters meeting the stricter Euro 5 standard.

The Association of German Automobile Manufacturers (Verband der Automobilindustrie, VDA) welcomed the rule, saying it would force older diesel vehicles with comparatively high emission values out of use while minimizing possible sanctions against new cars.

A spokesman for the environmental advocacy group German Aid to Environment (Deutsche Umwelthilfe - DUH) criticized the weakened provisions, however, saying that the states where vehicle makers DaimlerChrysler AG, Volkswagen AG, and MAN AG were based had pushed through the changes.

Earlier this year, private citizens under the guidance of environmental groups filed a number of lawsuits against German cities for exceeding the legal thresholds on particulate matter. EU air quality standards set a maximum threshold for coarse particulate matter (PM-10) of 50 micrograms per cubic meter of air averaged over a 24-hour period that can not be exceeded more than 35 days over a year (European Council Directive 1999/30/EC Relating to Limit Values for Sulfur Dioxide, Nitrogen Dioxide and Oxides of Nitrogen, Particulate Matter, and Lead in Ambient Air).

Automobile industry representatives and environmental advocates both urged swift passage of a separate government plan to bring down particulate matter that would offer tax breaks to vehicle owners who install filters.

2. Danish Budget Hikes Diesel Filter Subsidy

DKr300m (€40.2m) in subsidies for diesel particle filters heads the list of environmental initiatives in Denmark's 2006 budget. Environment minister Connie Hedegaard said the measure was intended to ensure that fitting filters would not increase costs for consumers.

3. Swiss Campaign Calls For Filters On Diesel Vehicles

The Transport and Environment Association, the Swiss Lung League and the trade union Unia have called for obligatory particle filters for all new diesel vehicles in Switzerland.

In Switzerland, up to 4,000 deaths per year are attributed to exposure to fine particles in the air from diesel exhaust fumes.

The campaigners have sought legal advice on the issue and claim that a general filter requirement could be introduced easily and rapidly.

They want all new diesel vehicles imported into Switzerland to be fitted with filters. The Transport and Environment Association says there are no legal obstacles to the introduction of this requirement. Currently, an estimated 30 per cent of diesel imports have filters.

At a news conference the association's president, Franziska Teuscher, contrasted the problem with the reaction to bird flu. "A slight suspicion of a pandemic is apparently enough to put half the world on alert, yet no alarm has been issued about particles, despite the fact that 3,000 to 4,000 people die each year through exposure to them," she said.

Particle filters are especially important for the health of construction workers, according to Hansueli Scheidegger of the largest trade union, Unia. It is already obligatory for large and medium-sized construction machines to be fitted with filters.

Teuscher added that it was the duty and the job of a government to take precautions for the wellbeing of the population.

The lawyer Rainer Weibel, who advised the Transport and Environment Association on the issue, said he saw no international legal grounds for not introducing obligatory filters. However, the WTO has raised objections, saying such a step would technically amount to a trade barrier.

Diesel emissions in Switzerland account for 40% of all fine particles released by traffic. A diesel engine produces up to 1,000 times more fine particles than a petrol engine.

According to a study by the Federal Spatial Development Office, more than 3,700 premature deaths annually are connected to particles released by diesel engines.

4. EU Court Says Austrian Truck Ban Illegal

Austria's Tyrol region imposed a ban in 2003 on trucks of over 7.5 tons from carrying goods such as waste, stone, soil, cars, timber or cereals on a section of the A12 motorway, to protect human, animal and plant health. But claiming that such a sectoral ban obstructed the free movement, and especially the free transit, of goods Europe's highest court ruled that the ban is against Community law. "The measure concerns a

road section of the utmost importance, constituting one of the main land routes between the south of Germany and the north of Italy," it said.

The court noted that the area had exceeded the annual limit for nitrogen dioxide in 2002 and 2003, placing Austria under an obligation to bring the level down. "However, the Tyrol sectoral ban and its legal basis, the Austrian law on air pollution ... do not fulfill all the conditions necessary for the disputed ban to constitute a measure covered by those directives," it said. "The sectoral traffic ban infringes the principle of proportionality," it added, saying Austria should have looked at less restrictive measures, did not study whether there were realistic alternative rail and road routes, and allowed only two months for implementing the ban.

5. Moscow Chokes, Drivers Fume in Mammoth Traffic Jams

Moscow's booming economy, fuelled by sky-high oil prices, has allowed Russians to indulge in consumer spending impossible in Soviet times. Cars are at the top of their shopping lists. Although only one in 10 Russians owns a car, car sales are booming and analysts expect them to reach around 2 million a year by 2008, up from 1.6 million now. Soviet citizens owned around 8 million private cars 15 years ago. But the sheer quantity of cars, combined with a general disregard for parking and traffic laws means the new cars all too often go slower than walking pace.

"We already have 3 million cars in Moscow and we get another 200,000 every year. We need to build more roads. We have a deficit now of 350 km (220 miles)." said Moscow mayor Yuri Luzhkov in a recent interview in daily Rossiiskaya Gazeta.

Moscow's traffic system is based around roads radiating from the centre which means a whole section of the city can be paralyzed by a major traffic jam. Pensioners managed to effectively cut off the city's main airport in January by blocking one of the major radial roads when protesting against benefits reform.

Luzhkov has already built or completed two ring roads for the city in an attempt to alleviate the problem and city hall is discussing whether Moscow needs another, but drivers say less dramatic changes would be the real solution.

"The roads, the streets and the 1980s-era parking facilities -- none of then were built with this (many cars) in mind," said Viktor Pokhmelkin, deputy in the State Duma lower house of parliament and head of the "Russian Drivers' Movement". He said sloppy policing, poor planning and a lack of government commitment had prevented any meaningful modernization of the roads, which tend to be lined with randomly parked cars that can reduce traffic to a trickle. There is also a chronic lack of underground parking facilities. "The Moscow roads are fairly wide, but they become narrow because there are cars parked all along both sides. The Moscow government has not taken steps to supply parking places for these drivers," he said.

Moscow drivers get particularly angry about traffic police stopping a row of cars to let a top official with a flashing blue light through first, but environmentalists say they should be more concerned about the pollution the cars generate.

Moscow's sky is often all but invisible through the smog and the air along major roads sticks in the throats of pedestrians -- something Alexei Kokorin of the WWF green group said is caused by the inefficient engines of old Russian cars. "Dangerous emissions from new cars are hundreds or sometimes a thousand times lower than from old cars. This is true above all of trucks. The most polluted parts of town are the ring road and the roads to the centre that the trucks use," he said. He said the main solution was to keep cars moving, by improving the traffic police and streamlining regulations. "In the end I think we will see a self-regulating process. Lots of people will not come into the centre because of the traffic jams," he said.

But drivers suggested the time when Muscovites would voluntarily leave their cars behind and use the city's public transport system was a long way off.

6. U.K. Hosts Climate Talks Under G-8 Mandate; Blair Notes Difficulty on Targets

On November 1st, Representatives from 20 governments met in London at the "ministerial meeting" of the Dialogue on Climate Change, Clean Energy, and Sustainable Development which was launched at the G-8 summit at Gleneagles in July. The U.K. government, which served as host, said the meeting focused on "energy and technology, and looking at how to move to a low-carbon economy and how soon that goal can be reached."

Specific topics included: deployment of clean technologies, such as renewable energy technology and carbon capture and storage; incentives for large-scale, private sector investment in low-carbon technologies; a new model for cooperation between developed and developing countries, as put forward by China, India, Brazil, South Africa, and Mexico at Gleneagles; and reinforcing action on adapting to the impacts of climate change.

Prior to the meeting, U.K. Environment Minister Margaret Beckett cited a proposal for a joint EU-China project on "near-zero-emissions coal" and U.K.-Indian cooperation on clean energy technology as evidence of "considerable progress" since the Gleneagles summit.

In a concluding speech, U.K. Prime Minister Tony Blair raised a number of points that some environmental groups said may signal a shift away from support for continuing the mandatory emissions cuts called for in the Kyoto Protocol, which currently apply only to the period 2008-2012. Blair said that it had been "extremely important" to have the treaty come into force. However, he added, "the blunt truth about the politics of climate change is that no country will want to sacrifice its economy in order to meet this challenge." He said that emissions targets make people "very nervous and very worried, because people fear some external force imposes an internal target that is going to restrict your economic growth."

After the first Kyoto commitment period ends in 2012, the world will require "a better and more sensitive set of mechanisms to deal with [climate change], because we cannot develop [the right] science and technology unless the private sector gets a framework within which its directions are clear," Blair said.

Some nongovernmental organizations responded by saying Blair's comments increased uncertainty for business.

The meeting in London was attended by ministers and senior officials from the G-8 countries (Canada, France, Germany, Italy, Japan, Russia, the United Kingdom, and the United States, as well as a representative from the European Union). In addition, officials also attended from Australia, Brazil, China, India, Indonesia, Mexico, Nigeria, Poland, South Africa, South Korea, and Spain, as well as representatives from the World Bank, U.N. Framework Convention on Climate Change, Intergovernmental Panel on Climate Change, International Energy Agency, and the U.N. Environment Program.

7. UK Says New Deal To Replace Kyoto Must Have Specific Targets

A new agreement to replace the Kyoto Protocol when it expires in 2012 will need specific targets that are applied sensitively to avoid damaging national economies, Britain's Environment Secretary Margaret Beckett told the EU Parliament. Beckett said a new framework agreement to tackle global warming and pollution after the Kyoto accord expires must have targets set over the right timeframe.

Beckett, whose country holds the rotating EU presidency, urged both EU member states and major polluters such as China and India to use cleaner energy supplies, arguing emissions are not being reduced as quickly as desired.

"The UK has repeatedly stated that formal agreements with targets are absolutely essential in any international climate change regime, not least because they give incentive and certainty to business community," she told the European Parliament.

Britain has made tackling global warming one its priorities during the six-month EU presidency that ends in December. But it has met strong resistance from the United States. U.S. President George W. Bush's administration has refused to sign the 1997 Kyoto accord, saying the caps on greenhouse gas emissions it demands would damage the U.S. economy. Bush also objects to large developing nations, such as China and India, being exempt from the treaty.

Britain believes getting developing countries on board is crucial. China, for instance, is investing massively in coal-fired power stations. By 2025, more than half of global annual emissions of greenhouse gases will be coming from developing countries.

8. Italy Earmarks €2 Billion to Meet Kyoto Targets, Buy Emission Credits

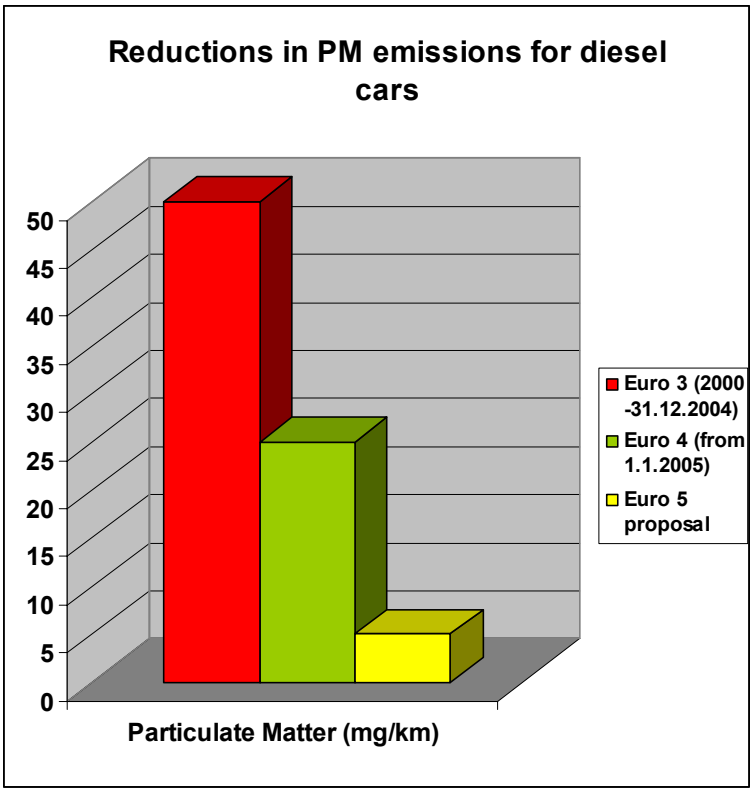
On November 2nd, the Italian government unveiled a plan that earmarks [Euros] 2 billion ($2.4 billion) over seven years to ensure that Italy meets its Kyoto Protocol targets for reducing greenhouse gas emissions. The plan, which relies heavily on the use of credits to reach the target, goes further than recent statements from Environment Minister Altero Matteoli, who said October 26th that around 40 percent of Italy's reductions would have to come from credits. The new plan estimates that at least 40 percent and as much as 60 percent of the reductions will come in the form of credits. The purchase of such credits will require up to 75 percent of the allotted budget, or [Euros] 1.5 billion.

Under the terms of Kyoto agreement, Italy must reduce its greenhouse gas emissions by 6.5 percent from 1990 levels by the 2008-2012 period. According to the latest official estimates, Italy's emissions were 8.1 percent above 1990 levels as of the end of last year.

The credits that Italy plans to purchase to meet its shortfall in reductions will come in one of the forms allowed under the Kyoto Protocol's "flexibility mechanisms," namely through emissions trading, Joint Implementation, or the Clean Development Mechanism. All of these allow credits representing emissions reductions in one place to be transferred to apply toward meeting targets in another place. Italy's plan did not specify what proportion of the credits might come under which flexible mechanism.

The plan also earmarks funds for improving the government's capacity to monitor emissions levels and for offering incentives for public transportation, for clean industries, and for companies and individuals that take steps to cut emissions. Funding is also set aside for the promotion and further development of Italy's internal emissions trading scheme, for research and development of technologies to reduce emissions, and for international cooperation programs that could produce collaborative efforts with neighboring states.

"We have to safeguard our national interests by seizing all mechanisms available," Matteoli said after the plan was announced. He added that the plans and the budget were designed not only to help reach Kyoto-mandated targets but also to modernize the Italian economy. "We have to look beyond the Kyoto Protocol and to act as our own catalyst toward promoting a low-carbon industrial sector," he said. "This is the way to go in the long run."



9. The European Commission Proposes Weak Euro 5 Standards

The European Commission has adopted a proposal for a new Euro 5 standard for light-duty vehicles. The proposal will now enter the co-decision process involving the Council (ministers of the EU member states) and the European Parliament.

Some key features of the proposal are:

- PM (diesel engines): the standard for PM emissions will be

reduced from 25 mg/km to 5 mg/km. At today's technology setup this implies the introduction of closed PM filters for all diesel cars.

- PM (spark ignition engines): the same PM limit value as for diesel engines is introduced for direct injection spark-ignition engines.
- NOx (diesel cars): will fall by 20% from 250 mg/km to 200 mg/km. The proposal does not contain a future Euro 6 stage. However, the explanatory memorandum holds out the prospect of a future review.
- Durability of pollution control devices: the durability period over which manufacturers must ensure functioning of pollution control equipment will be extend from 80.000 km to 160.000 km. (Note that this only concerns the *durability* requirements and not those *on in-use compliance*, which require the car manufacturers to conduct tests on actual vehicles that are in use, and which remain unchanged at 100,000 km)
- Spark-ignition engines: Euro 5 includes a reduction of emissions standards for hydrocarbons (-25%, to 75 mg/km) and NOx (-25%, to 60 mg/km).
- Heavy passenger vehicles: Up until Euro 4, M1 vehicles above 2.5 tons only have to comply with the less stringent limit values for N1 vehicles. In Euro 5, they have to comply with the requirements for passenger cars.
- Entry into force 18 months after the adoption of the Regulation. Assuming the co-decision takes 1 1/2 years, this would mean Euro 5 around the beginning of 2009.
- Future review:
    - Non-methane emissions of hydrocarbons: At present, the limit value for hydrocarbons covers all hydrocarbons. There have been calls to move towards a standard for non-methane hydrocarbons instead, which would support natural gas powered vehicles. For petrol cars, this would not make much of a difference as methane only constitutes in the order of 5% of total hydrocarbon emissions, but for natural gas vehicles, it would make it much easier to meet the standards as methane is a much higher share of total hydrocarbons (40-50%). Methane reacts more slowly in the ozone-formation process, which means that it is not a big contributor to peak ozone episodes. However, it contributes to the background concentration. New health evidence from the WHO shows that background concentrations of ozone are also a health threat. Methane has a long life time in the atmosphere and therefore contributes to the ozone background across the Northern hemisphere. The limit value in the Euro 5 proposal still covers total hydrocarbons but there is the announcement of a possible review of the current system.
    - Move to particulate number standards: the Euro 5 emission standards apply to the mass of particulate emissions (expressed in grams per kilometer). As noted above, they are expected to lead to the introduction of PM filters for all diesel cars. There is however a risk that in the future so-called open filters might enter the market in certain vehicles, thus meeting the mass standard while failing to block ultra-fine particulates. The proposal foresees a revision in order to introduce a limit value on PM number counts in addition to the mass standard, as soon as the UN-ECE Particulate Measurement Program (PMP) has finalized the verification of its measurement procedure.
    - Future NOx reduction: the explanatory memorandum (but not the legal

text) states that "The Commission intends to review in 2009 the issue of further improvements of emissions, following the mid-term review of the CARS 21 report, with a view to proposing a further significant reduction of limit values (including NOx) that reflect the development in vehicle emission technology at that point in time and cost-effectiveness considerations."

Diesel cars

	Particulate Matter (mg/km)	**NOx (mg/km)**
Euro 3 (2000 -31.12.2004)	50	500
Euro 4 (from 1.1.2005)	25	250
Euro 5 proposal	5	200

Petrol cars

	HC (mg/km)	**NOx (mg/km)**
Euro 3 (2000 -2005)	200	150
Euro 4 (from 2005)	100	80
Euro 5 draft proposal	75	60

The ICCT had recommended a diesel NOx standard of 60 mg/km with the possibility of additional lead time to bring diesel NOx in line with gasoline NOx standards.

10. EU Auto Industry Working Group Supports Proposed Emission Rules

On December 12th, a high-level group of EU government and private-sector experts called on the European Commission to propose new automobile emission standards. The recommendations from the program, dubbed the Competitive Automotive Regulatory Environment for the 21st Century ("CARS 21"), call for the following measures:

- an 80 percent reduction in particulate matter from diesel cars to 5 milligrams per kilometer relative to the 25 milligram per kilometer standard that became mandatory in January of 2005;
- a 20 percent reduction in nitrogen oxides emissions from diesel cars;
- a 25 percent reduction in emissions of both nitrogen oxide and hydrocarbons from petrol cars;
- extension of the durability period of which manufacturers must confirm the operation of emission-control devices such as catalytic converters and particulate traps;
- passenger vehicles with a mass of more than 2,500 kilogram can no longer use the less ambitious emission standards for light commercial vehicles.

A leading environmental group specializing on transport issues criticized the plan.

"The 10-year road map contains no new policies to combat rising overall emissions and several existing policies are set to be weakened," said Jos Dings, the director of the European Federation for Transport and Environment. "European car makers will soon be selling dirtier diesel cars in their home market than they export to buyers in the United States. Verheugen has repeatedly called for Europe to produce the cleanest cars in the world but the EU is further from reaching this goal today than it was before CARS 21 was set up."

11. Russian Auto Industry Experiencing Globalization Pains

Russian news service Itar-Tass is reporting that as a byproduct of Russia's expected entry into the World Trade Organization (sometime in 2006); government officials are wringing their hands over the antiquated state of the country's auto industry. With the exorbitant customs duty system that effectively insulated Russia from external competition coming to an end in order to gain entry to the WTO, local automotive concerns and government officials are increasingly feeling the heat of global competition.

Possibly weighing a provision similar to the Chinese, Russian officials are contemplating methods to encourage 'joint assembly projects' with foreign manufacturers. This isn't a new idea in the market, as AvtoVAZ has worked with Chevrolet for some time now, and a version of the Kia Spectra is now coming on stream in one of their other factories. Some efforts, like that of Daimler-Chrysler, have stumbled due to local technological and logistical constraints, and many fear that Russia lacks the technology necessary to wholly produce competitive vehicles, joint venture or no.

Other protectionist strategies being considered include hiking import taxes, and an odd gerrymandering of what qualifies as a 'new' automobile. According to the country's Industry and Energy Ministry, Russia's car market last year rang up at some 1.6 million units, and sales are expected to go up by 200,000 vehicles. Forecasters predict massive growth, with 2.6-2.8 million units possible by 2010, which makes the country's appeal for foreign automakers obvious.

12. TNK-BP To Export Low-Sulfur Fuel Via Lukoil's Terminal In Vysotsk.

TNK-BP is in talks with Lukoil regarding the export of low-sulfur fuel produced at the Ryazan refinery via Lukoil's terminal in Vysotsk, said Antony Considine, Executive Vice President for TNK-BP's Refining and Marketing businesses. TNK-BP announced the commissioning of a major upgrade of the Ryazan refinery with the inauguration of the vacuum gasoil hydrotreater unit. This represents substantial completion of a comprehensive modernization project at the refinery originally begun in 2000.

The launch of the VGO hydrotreater will bring the Fluid Catalytic Cracker to its maximum capacity of 2.5 million tons per year, and make it the largest cat cracking unit in Russia. As a result, the refinery will be producing incremental amounts of high octane gasoline and Euro-grade diesel fuel. Upgraded refinery operations will also lead to a 10% reduction in emissions for every ton of crude oil processed.

Equipment for the construction was sourced from both Russia and abroad while the principal VGO reactors were manufactured in Russia.

The Ryazan refinery was commissioned in 1960, and currently has a capacity for crude oil processing around 17 million tones per year. Its maximum effective capacity is currently around 15.5 million tones per year due to the capacities of the upgrading units.

The refinery produces a full range of oil fuel products such as LPG, gasoline, kerosene, diesel fuel, fuel oil, lubricating oils, bitumen, and solvents.

13. Germany Expected To Adopt More Business-Friendly Policies

On November 22nd, Germany's Parliament voted in a new coalition government whose environmental policy plans would, among other things, relax strict liability provisions for the planting of genetically modified crops. The plans of the "grand coalition" also call for some additional changes from the environmental policies of the Social Democratic Party (SPD), which dominated the previous government and is one of the partners in the new government. Overall, the plans give greater prominence to economic considerations in formulating and carrying out environmental policy.

The parties in the new government, the SPD and the Christian Democratic Union/Christian Social Union (CDU/CSU), wrapped up coalition talks and released their framework agreement Nov. 11. Angela Merkel of the CDU is Germany's new chancellor, while Social Democrat Sigmar Gabriel is to head up the Environment Ministry, replacing Juergen Trittin of the Green party.

The proposals of the previous government, made up of the SPD and the Greens, tended to get blocked in Parliament since that coalition had only a minority of seats in the upper house (Bundesrat). It was this gridlock, in combination with losses in state elections, which led former Chancellor Gerhard Schroeder to call for the September parliamentary elections in which no party received enough votes to form a government on its own.

The coalition agreement contains a series of environmental proposals which are mostly continuations of those begun under the previous government. Those include long-debated plans to sort out conflicts between state and federal law over which level should have jurisdiction over environmental matters, and to configure automobile taxes and truck road tolls based on vehicles' emissions.

The new government also said it would aim to improve the carbon dioxide emissions trading system at the national and European Union level, and would try to get large countries that are not participating in the Kyoto Protocol to take on emission-reduction commitments.

Other aspects of the energy policy reveal the inability of the two parties to reach a common position. The agreement leaves intact the previous government's policy of a gradual phase-out of nuclear power plants, and the rate guarantees for electricity from renewable sources.

As the two majority parties hammered out their joint program, the Federation of German Industry (BDI) and the German Chamber of Industry and Commerce (DIHK), Germany's

most powerful business lobbies, took the opportunity to push for a retreat from what they called the ideologically driven energy policy of the previous coalition, under which the Green party had control of the environment ministry. The associations demanded a reduction in the environmental tax on oil and gas, a loosening of the industry limits on carbon dioxide emissions, and lower subsidies for electricity from renewable sources.

On October 14th, DIHK released a list of energy policy demands for 2015, calling for more emphasis on the development of technology for reducing CO2 emissions, the further development of nuclear energy, and scope for more energy options in addition to biofuels and hydrogen cells.

14. European Commission Promoting EEV Vehicles

The European Commission proposed new legislation to require public fleets to purchase more "clean" vehicles in order to reduce pollutant emissions in the transport sector. Under the proposal, a minimum of 25% of heavy-duty vehicles purchased or leased each year by public transport operators must be "Enhanced Environmentally friendly Vehicles" (EEVs).

Heavy duty vehicles include buses and most utility vehicles, such as refuse collection trucks. The EEV vehicle procurement obligations are initially limited to these vehicle categories for which the market shares accounted for by public bodies are significant (approximately 6% in the case of trucks and around one-third in the case of buses).

EEVs are vehicles that are type approved to a voluntary emission standard that is more stringent than current Euro III/IV requirements. The EEV emission limits for NOx and PM are equal to those of the Euro V (2008) standard. EEVs can be clean diesel or gaseous fuel vehicles.

15. France Introduces CO2 Taxation Scheme For Corporate Vehicles

France will be adopting a new corporate vehicle taxation system, where the tax rate will be linked to the vehicle CO2 emission rating. The tax rate will increase progressively with the vehicle's CO2 emission rating, as classified by the current CO2 labeling scheme which divides vehicles into 7 CO2 emission categories. For the "green" vehicles (CO2 up to 100 g/km, 120 g/km, and 140 g/km) the tax rate will be 2, 4, and 5 euro, respectively, per gram of CO2. For example, the tax rate for a 140 g/km car will be 700 euro, several hundred euros less than before.

For medium cars of 141-160 g/km CO2, the tax rate jumps to 10 euro per g of CO2. Taxes in this vehicle category will be comparable to the rates under the old system.

Taxes will increase for high CO2 emitters. The tax rate for vehicles of 161-250 g/km will be 15-17 euro, and 19 euro above 250 g/km CO2. For instance, the tax for a 251 g/km car will be 4769 euro.

Introduction of a CO2 based taxation system for company cars in the UK a few years ago has stimulated purchases of diesel cars.

16. EU "On Track" To Comply With Kyoto Targets

The EU is "well on its way" to achieving its Kyoto target for reducing greenhouse gas emissions, a report by the European commission has indicated. New projections show that EU-15 countries can meet and even exceed their commitment to reduce output to 8% below 1990 levels by 2008-12.

According to the projections, the EU-15 are headed towards emissions 6.8% below 1990 levels by 2010, taking into account both existing policies and those "already in an advanced state of planning". Counting commitments by nine EU-15 states to purchase foreign emission credits through the Kyoto flexible mechanisms the projected figure reaches -9.3%.

The projection is slightly more optimistic than previous estimates released last year, which put the EU-15's potential, including new policies and use of the Kyoto mechanism, at -8.6% by 2010.

The commission expects the EU-25 - which does not face a collective Kyoto commitment - to perform even better. With planned additional measures it is projected to be 9.3% below 1990 levels by 2010. With Kyoto mechanisms this rises to -11.4%.

Amidst the good news the report shows that Italy, Portugal, Slovenia and Spain are currently not on track to meet their national targets even allowing for commitments to buy foreign Kyoto credits made by Italy and Spain. Only seven countries - the UK, France, Germany, Poland, Czech Republic, Estonia and Latvia - are projected to meet their national targets without having to purchase credits.

Among existing policies counted by the commission are the EU emissions trading scheme, voluntary commitments by the car industry, and third-country projects already implemented. Additional policies are initiatives announced for the second phase of the European climate change program.

The use of carbon sinks such as forests to offset emissions was not taken into account in projections.

17. Better Regulation "Must Not Mean Deregulation"

The EU's better regulation agenda is in danger of producing environmental deregulation, environmental experts warned in a new report. This would distort the agenda's original aims and undermine environmental protection, the Institute for European environmental policy (IEEP) said.

Better regulation is gradually transforming the way the EU makes legislation. In its report IEEP tries to counter what it says is a growing tendency for the process to be driven by the EU's Lisbon agenda for more jobs, growth and competitiveness.

Echoing a recent report by all of Europe's national environmental protection agencies, the institute insists that environmental regulation does not necessarily harm the economy. Environmental protection remains a necessary goal and competitiveness alone is not enough, it adds.

IEEP documents several examples of better regulation putting EU environmental policy on the defensive. High-level commissioner groups are increasingly screening environmental measures for competitiveness impacts, for example.

Some existing green legislation is being simplified in ways that "could reduce its scope and effectiveness", the institute adds. And commission procedures for assessing impacts of draft legislation is emphasizing short-term economic costs and downplaying longer-term and broader impacts.

NORTH AMERICA

18. Canada Harmonizes Off Road Sulfur Content Standards With U.S. Rules

On October 19th, Environment Canada published finalized amendments to Canadian regulations governing sulfur content in diesel fuel used in off-road, rail, and marine vehicles, that will harmonize Canadian standards with those in the United States. The amendments to the "Sulphur in Diesel Fuel Regulations" set sulfur limits in fuel that match Canada's standards for fuel used in on-road diesel engines and align with standards being implemented by the U.S. Environmental Protection Agency, the department said in a regulatory impact analysis statement. The statement was published with the final regulations in the Oct. 19, 2005, issue of the Canada Gazette, Part II.

The regulatory changes are part of the Canadian government's overall agenda for making fuels and vehicles cleaner to protect the environment and human health, federal Environment Minister Stephane Dion said Oct. 19. Since 2001, the Canadian government has implemented tougher standards for particulate matter, nitrogen oxides, and volatile organic compounds from on- and off-road vehicles, engines, and the fuels that power them, he said.

Key elements of the finalized amendments include:

- setting a maximum sulfur level of 500 milligrams per kilogram, effective June 1, 2007, for fuels produced or imported for use or sale in Canada, expanded by Oct. 1, 2007, to all fuels sold or offered for sale in Canada;
- a further reduction in the maximum sulfur level to 15 milligrams per kilogram, effective June 1, 2010, for fuel produced or imported for use or sale in Canada, extended to all fuel sold or offered for sale in Canada by Oct. 1, 2010;
- setting a maximum sulfur level of 500 milligrams per kilogram, effective June 1, 2012, for diesel fuel sold or offered for sale or use in locomotives or marine vessels; and
- special provisions for Canada's northernmost regions that would delay application of the 500-milligram limit for sales of off-road rail and marine diesel fuels to Dec. 1, 2008, and the 15-milligram limit to Nov. 30, 2011.

Environment Canada said it received a number of comments on the draft form of the regulations, some of which were accepted and are reflected in the final version. The draft rules were published Oct. 2, 2004. Several comments pointed to an inconsistency in the draft regulations that set the grace period for meeting the 500-milligram limit from the point of production/import to the point of sale at four months and the grace period for the same progression to the 15-milligram limit at three months, the department said. The final regulations set both grace periods at four months, the same approach taken in the United States, it said.

The regulations also contain, in response to comments from industry and interest groups, a clarification of the term "diesel fuels" to cover biodiesel fuel and blends of biodiesel and diesel fuels, it said.

However, the department noted that it rejected a number of other proposals outlined in comments received on the draft rules. For example, it rejected a proposal to establish less stringent standards for the Yukon Territory to reduce the costs of a proposed refinery project, it said. Companies have had adequate time to develop plans to incorporate the new standards, and granting relief to support one facility would tilt the level playing field for the industry as a whole, it said.

The Regulations include a later sales limit in the Arctic region, to allow for slower turnover of diesel supplies and to reflect logistical difficulties in the far north.

19. Builders, Trucking Execs Share Different Views On 2007 Engines

When it came time for a panel discussion at the October 18th afternoon session of the annual American Trucking Associations Management Conference and Exhibition, the manufacturers were on one side of the podium, the trucking companies on the other. In general, the manufacturers expressed optimism that the work they have done to get the 2007 engines ready for market was paying off. The trucking company officials, meanwhile, all expressed concerns about how the new engines, mandated by environmental regulations, would impact their businesses.

“The good news is that our (2007) test engines meet the new emissions standards and will meet fuel economy standards,” Peter Karlsten, president and CEO of Volvo Trucks North America, said, adding that the company’s testing indicated the 2007 compliant Volvo engines will maintain the fuel economy level demonstrated by current Volvo engines.

Ed Pence, vice president and general manager of Cummins, said his company was responding the same way it did when it was building 2002 compliant engines. “As Cummins and our partners in trucking industry prepare for 2007, it is important to reflect on the commitment we made in 2002,” Pence said. “That commitment in 2002 was the foundation for our mutual success then and will be the foundation in 2007 and beyond.” The proof is on the road, he said. “After three years there are over 150,000 Cummins heavy duty engines with more than 16 billion miles of real world experience demonstrating we met this challenge in support of your business,” he told delegates.

“I think we have to recognize this is one of the principal inflationary costs coming into our business,” Christopher Lofgren, president and CEO of Schneider National, said. “When we started down this path in 2002, the Environmental Protection Agency said it was a non-event. Well, it turned out to be a true event.” He estimated the cost of upgrading the company’s fleet to the 2002 engine was $15,000 per unit and the change to 2007 engines would probably be $18,000 per unit. “In the end, it’s all about the dollars and where we are going to get them,” Lofgren said.

Kevin Knight, chairman and CEO of Knight Transportation, said his company had run a 2007 test engine 50,000 miles without problems, but was quick to express concern about the cost of the low sulfur diesel fuel required for the engines. “I think our biggest risk is in the low sulfur fuel area,” he said.

If what Glenn Brown, chairman and CEO of Contract Freighters Inc., said, there is reason to worry. “We finally found some in Springfield, Mo., and had to pay $4.35 per gallon in bulk, which far exceeded our expectations,” he said.

20. EPA's Awards More Than $1 Million in Clean Diesel Grants

As part of the National Clean Diesel Campaign, EPA Administrator Stephen L. Johnson announced the recipients of 10 grants totaling more than $1 million to support clean diesel projects. The value of the grants will nearly triple to $3 million, as industry partners contribute almost two dollars for every dollar of federal funds. "President Bush and EPA are committed to continuing our march toward cleaner, healthier air," said Johnson. "'Together we will make the black puff of diesel smoke a thing of the past.'"

The grants will fund projects that reduce emissions from nonroad sources, such as those used in construction and on port docks. Innovative technologies introduced through the projects will include the use of cleaner fuels, after treatment devices such as catalysts and filters, and engine replacement. Many of the grants will support projects that reduce emissions in low income neighborhoods and areas that don't currently meet federal air quality standards.

Through the National Clean Diesel Campaign, more than 500 partners have engaged in clean diesel activities reducing emissions from more than 300 clean diesel projects across the nation. Together, these projects have reduced hundreds of thousands of tons of nitrogen oxides and tens of thousands of tons of particulate matter.

The recipients, along with location and the amount received, are:

- Colorado (EPA Region 7), City and County of Denver, Colorado ($125,000)
- Hawaii (EPA Region 9), American Lung Association of Hawaii ($135,000)
- Idaho (EPA Region 10), Idaho Department of Environmental Quality ($100,000)
- Maryland (EPA Region 3), Maryland Department of the Environment ($50,000)
- Massachusetts (EPA Region 1), Massachusetts Executive Office of Environmental Affairs ($120,000)
- New York (EPA Region 2), New York State Energy Research and Development Authority ($100,000)

- Oregon (EPA Region 10), Oregon-Columbia Chapter of Associated General Contractors ($120,000)
- Pennsylvania (EPA Region 3), Clean Air Council ($100,000)
- South Carolina (EPA Region 4), York Technical College ($95,040)
- Wisconsin (EPA Region 5), Wisconsin Department of Natural Resources ($100,000)

21. Mexico to Speed Introduction Of Cleaner Diesel Fuels Along U.S. Border

Mexico has pledged to accelerate by one year the introduction of fuels with lower sulfur content along the U.S. border and has signed a letter of intent to work with the United States on reduced diesel emissions. The pledge was made on October 19th by Mexican Secretary of Environment and Natural Resources Jose Luis Luege Tamargo at a binational conference in Tijuana, Mexico.

Instead of introducing the lower-sulfur fuels in 2008, as called for under a rule published recently by the Mexican government, officials plan to move up the introduction to 2007 along the U.S. border. The 2008 date still applies for the rest of the country.

Wayne Nastri, administrator of the U.S. Environmental Protection Agency's Region 9, joined Tamargo in making the announcement at the conference, which was part of the binational Border 2012 Program.

In a statement, Tamargo said, "Obviously, this involves heavy investment from Mexico's petroleum industry, but we're going to do everything we can to ensure we have diesel fuel and gasoline with the lowest content of sulfur possible." Tamargo said the directive establishing maximum limits for sulfur in specified gasoline types and diesel fuels, was published Sept. 20 and that the ministry's definitive approval was expected on November 20. The initiative was announced on August 1.

The announcement has special significance for air quality in the border region where the North American Free Trade Agreement has resulted in the opening of some U.S. roads to Mexican trucks that burn lower-grade fuels.

The letter of intent, which is not legally binding, joins both nations in encouraging early emissions reductions from diesel engines, promoting projects seeking cost-effective technologies that can bring them about, and to cooperate on "transborder initiatives designed to improve air quality and public health." Under Border 2012's San Diego/Tijuana Clean Diesel Demonstration Project, diesel trucks are now being retrofitted with diesel oxidation catalysts or particulate filters. The retrofitted trucks used in combination with ultra-low sulfur diesel fuel will substantially reduce pollution from heavy-duty trucks based in the Tijuana area. Three trucks had retrofits installed in September, 2005 and 40 more trucks will be retrofitted by the fall of 2006.

22. CARB Approves Measures To Cut Emissions from Diesel Buses, Trucks

At an October 20th meeting in Sacramento, the California Air Resources Board decided to require a transit agency to equip an older diesel bus with pollution control equipment for every new diesel bus it purchases between 2007 and 2009. The agency also approved a measure imposing a five-minute idling restriction on heavy-duty diesel trucks with sleeper births. CARB had adopted a rule in 2004 that capped all non-essential idling by other diesel-fueled commercial trucks and buses at five minutes. Truck drivers idle engines to operate air conditioners, heaters, and on-board accessories such as televisions and computers.

Like the earlier rule, the restrictions for trucks with sleeper births allow the use of alternative technologies to provide power. Internal combustion auxiliary power systems (APS) and fuel-fired heaters, certified to meet California standards, may be used, according to CARB. Also allowed is other non-emitting equipment, such as thermal storage systems, fuel cell APSs, and power inverter charges that can be used with batteries or plugged in to electricity at truck stops.

California is among more than 20 states to impose idling restrictions on trucks. There are currently no federal rules limiting idling, but the Environmental Protection Agency does provide grant money to fund equipment and electrification of truck stops to reduce the practice.

Under the revised idling rule, new trucks in 2008 that weigh more than 14,000 pounds (gross vehicle weight) must come equipped with devices that automatically shut down engines after five minutes of idling. Engine makers have the option of leaving off the shut-off devices as long as they certify nitrogen oxide emissions, while idling, do not exceed 30 grams an hour, according to the rule.

Emissions from idling trucks at truck stops, travel centers, rest areas, warehouse/distribution facilities, and port terminals produce highly localized and concentrated levels of pollution, CARB said.

In a separate action, CARB revisited the nitrogen oxide emission standards it set for diesel buses, effective for the 2007-2009 model years. Engine manufacturers have declared they will be unable to meet those standards. CARB decided to consider revising the standard because transit agencies would not be buying new buses until 2010 and later, keeping older, higher-emitting buses in use longer. As a result, the emission reductions anticipated would not be achieved, the agency said. About 275 fewer new buses would be purchased between 2007 and 2009, according to CARB.

The agency's governing board weighed relaxing the 0.2 gram per brake horsepower-hour (g/bhp-hr) standard to align it with the 2007 federal and state NOx standard for heavy-duty diesel trucks (1.2 g/bhp-hr) or requiring transit agencies to purchase only alternative fuel buses during the same period. Natural gas-powered buses are expected to meet the 0.2 g/bhp-hr NOx limit by 2007, according to CARB.

The emission standards CARB adopted in 2000 gave transit agencies the choice between diesel and alternative fuel fleets. More than half, or 57 percent, opted for the diesel path, CARB said. Those public transit fleets, which included fleets that operate in the San Francisco Bay Area, voiced strong opposition against requiring a switch to natural gas technologies. Forcing them to convert to natural gas would cost millions, they said.

In the end, the governing board agreed that requiring a switch at this point would be unfair. The board decided not to revise the NOx standard, but to offset the unrealized emissions reductions with a bus-to-bus retrofit standard. For each new bus purchased before the 2010 models that will meet the 0.2 NOx standard are available, emission control equipment must be installed on an older bus. The board directed staff to evaluate whether transit agencies would have access to grants to help defray costs of purchasing new buses. The fact that the new buses would not meet the 0.2 NOx standard may disqualify them for the grants, in which case CARB may opt to revise the rule to ensure funding.

23. Pollution Is Chipping Away At Bermuda's Air Quality

Bermuda's environment is suffering a variety of pollution-related ailments which are chipping away at the quality of both the air and the sea.

Scientists participating in a forum on sustainable development said many of the Island's environmental problems are tied directly to its disposal of waste (including sewage) but air quality is also suffering from the high number of vehicles on the roads.

Dr. Andrew Peters, a scientist from the Bermuda Biological Station for Research (BBSR), told the roughly 90 people gathered at Bermuda College that the Island's air quality, while still generally good, is starting to suffer. East Broadway is the most polluted spot in Bermuda, he said, and much of the pollution is coming from Bermuda's high numbers of scooters and auxiliary cycles.

"Two-wheel vehicles tend to be a lot dirtier," he said, since they have higher emissions. Bermuda has the second highest proportion of motorcycles in the world, he added, exceeded only by India.

Since 2000 the amount of airborne particles around East Broadway has crept up to and exceeded the safe limit, he said, even surpassing the annual readings of air pollution in some European cities. Particularly dangerous to the public are those particles small enough to be inhaled deeply into the lungs, "which can physically block the lungs, forcing the heart to work harder in pumping blood", he said.

"The UK Department of Health estimates that up to 24,000 people die prematurely per year in the UK because of the effects of air pollution, with many thousands more requiring hospital treatment."

While the air is becoming more polluted, Dr. Peters said studies have shown that pollution does not seem to be coming from the Tynes Bay incinerator, as many incinerator opponents feared when it was constructed back in 1992. The incinerator's location leaves the Prospect Fort area the most vulnerable to pollution from it, but this area is not as polluted as East Broadway, Dr. Peters said.

24. ExxonMobil To Fund Urban Bus Retrofits

ExxonMobil has reached a comprehensive Clean Air Act (CAA) agreement that is expected to reduce harmful air emissions by more than 53,000 tons per year at the company's seven U.S. petroleum refineries, the Department of Justice and the Environmental Protection Agency (EPA) announced today. The seven refineries, located in five states, represent approximately 11 percent of the total refining capacity in the United States. Today's settlement is the 17th in a joint DOJ-EPA initiative to reduce pollution in domestic petroleum refineries nationwide, bringing nearly 77 percent of domestic refining capacity under consent decree. These settlements were reached without litigation as the companies agreed to work with the government in reaching settlements that would protect the environment and allow refiners to expand fuel production in compliance with the environmental laws.

The settlement was reached through the lodging of two separate consent decrees, which require ExxonMobil to install and implement innovative control technologies, reducing annual emissions of harmful toxins that can cause serious respiratory problems and exacerbate cases of childhood asthma. As a result of the agreement, emissions of nitrogen oxide (NOx) will be reduced by nearly 11,000 tons per year and sulfur dioxide (SO2) by over 42,000 tons per year. In addition, the company will upgrade its leak detection and repair practices, minimize flaring of hazardous gases, reduce emissions from its sulfur recovery plants and adopt strategies to ensure the proper handling of hazardous benzene wastes at each refinery. ExxonMobil has estimated that the capital cost of the injunctive relief program will be approximately $571 million.

Three states have also joined in today's settlement: Illinois, Louisiana, and Montana. Under the terms of the agreement, ExxonMobil will pay $8.7 million in civil penalties, and spend an additional $9.7 million on Supplemental Environmental Projects (SEPs) in communities around the company's refineries. As partners in the settlement, the states of Illinois, Louisiana, and Montana will share in the civil penalties.

The affected ExxonMobil refineries are located in Baton Rouge, La.; Baytown, Texas; Beaumont, Texas; Billings, Mont.; Chalmette, La.; Joliet, Ill.; and Torrance, Calif. The Chalmette Refinery is owned by Chalmette Refining, L.L.C., a joint venture between ExxonMobil and Petroleos de Venezuela S.A.

ExxonMobil's refinery in Chalmette, La., was heavily affected by Hurricane Katrina and is temporarily out of operation. At the request of ExxonMobil, today's consent decrees reflect a more flexible compliance timetable for that particular refinery.

Several of the proposed SEPs will benefit communities surrounding the refineries and include: reducing air emissions by retrofitting or replacing municipal bus fleets in communities near the Baytown, Beaumont, Billings, Joliet, and Torrance Refineries; performing four different emission reduction projects at the Baytown, Billings, Chalmette, and Joliet refineries, which are not otherwise required by law; and providing $3.7 million to the Louisiana Wildlife and Fisheries Foundation for coastal habitat protection and restoration in the state.

25. Volvo Unveils US 2007 Truck Engine Plans

Volvo Trucks North America, Inc. announced that it will offer a complete family of Volvo diesel engines to meet the new emissions standards which take effect in 2007. The new

family of engines will include 11- and 13-liter models, in addition to the 16-liter Volvo D16 introduced earlier this year.

The new engines will use proven technologies to meet the stringent 2007 emissions requirements. But they will also build upon Volvo's engine technology to deliver a new level of performance and productivity.

Volvo plans to launch the engines to customers and dealers during the first quarter of 2006.

As previously announced, Volvo has selected **high-performance exhaust gas recirculation (HEGR) as the primary NOx emissions control and a diesel particulate filter (DPF) for particulate control for its EPA'07-compliant engines**. These technologies are well-known to Volvo and have shown themselves to be reliable and durable in operation. Tens of thousands of Volvo trucks with EGR systems have proved themselves in everyday operation on North American highways. Volvo engines for 2007 will simply use a higher rate of EGR to achieve the lower NOx emissions. All of Volvo's 2007 engines are designed to use the ultra-low sulfur diesel (ULSD) fuel mandated by the U.S. government to be available in the second half of 2006.

In addition to the emissions reductions solutions, Volvo's 2007 engine family will include the following key hardware:

- Advanced, high-pressure fuel injection with multiple injections per stroke
- Increased peak cylinder pressures
- Single-stage variable geometry turbocharger (VGT)
- Reinforced base engine components to handle internal loads
- High-capacity cooling system fully integrated into truck design
- Advanced centrifugal crankcase ventilation
- The current Volvo D16 is the first example of this new engine architecture.

Volvo Trucks North America will also continue to offer the popular 15-liter Cummins ISX as an option in its Volvo VN and Volvo VT highway tractors.

26. DaimlerChrysler Sells 500 Hybrid-Electric Buses To New York

DaimlerChrysler Commercial Buses North America has received a contract for 500 Orion VII hybrid-electric buses from New York City transport services. New York City Transit has ordered 216 Orion VII hybrid-electric buses and Metropolitan Transportation Authority (MTA Bus) 284 units. This is the largest order for hybrid buses in history. Orion, DaimlerChrysler's North American city bus brand, will begin deliveries in the second quarter of 2006. This is the third hybrid order in New York City for Orion complementing the prior orders of 200 units and 125 units respectively.

DaimlerChrysler's Commercial Vehicles Division has also developed hybrid drive systems for the light truck and van segments, as well as advanced diesel engines

utilizing SCR (BlueTec) technology for its medium and heavy duty Mercedes-Benz trucks and buses.

Orion, along with partner BAE Systems producer of the HybriDrive® series hybrid propulsion system, are the leading brand of hybrid buses worldwide with more than 300 units in revenue service and 700 more units on order for the Toronto Transit Commission, San Francisco MUNI and now New York City Transit and MTA Bus. Trusted for their significant emissions reductions and fuel savings compared to standard diesel buses, Orion Hybrid buses also outperform conventionally powered vehicles.

Compared to standard diesel propulsion, the hybrid units will provide significantly better fuel economy while greatly reducing emissions: 90 percent less particulate matter, 40 percent less NOx, and 30 percent fewer greenhouse gases. Drivers will enjoy faster acceleration and customers will experience a quieter, smoother ride free of the frequent transmission shifts encountered in conventional buses.

Orion, a brand of DaimlerChrysler, operates facilities in Greensboro (North Carolina), Oriskany (New York), and Mississauga (Ontario). DaimlerChrysler Commercial Buses North America produces and markets a wide range of commercial bus and coach products under the Orion, Setra, and Dodge Sprinter brands and is a unit of DaimlerChrysler, the world's leading manufacturer of buses and coaches for Class 6 and higher, with more than 32,000 chassis and complete buses produced annually.

27. New Diesel Fuel Rules Go Into Effect In Central Texas

The state's new Low Emission Diesel rules went into effect, after a one-month delay ordered by Gov. Rick Perry to reduce potential disruptions in the aftermath of Hurricane Rita. The rules are aimed at reducing emissions from diesel vehicles in a number of Texas counties including Bell, Bosque, Coryell, Falls, Freestone, Hill, Leon, Limestone and McLennan.

The rules, which apply to diesel fuel producers, importers, common carriers, distributors, transporters, terminal operators and retailers, require that diesel produced for delivery and sale must contain less than 10 percent of aromatic hydrocarbons and must have a cetane number of 48 or greater. The cetane number is a measure of the ignition quality of diesel fuel. The higher the cetane number is, the greater the efficiency.

28. Court Says EPA Must Veto Air Pollution Permits for Power Plants

In a decision of national significance, a New York federal appeals court has ruled that the Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to take immediate action to reduce air pollution at facilities that have been notified by the state that they are exceeding their emission limits. In a case involving pollution from two of the largest coal-fired electric generating plants in New York, the court ruled that Title V of the Act requires EPA to veto state air permits for those plants because the permits fail to include requirements limiting the very pollution that prompted the state violation notices.

The challenged permits were issued to the Huntley and Dunkirk power plants by the New York State Department of Environmental Conservation (New York DEC). The plants are two of the state's most notorious polluters, responsible for 38% of sulfur dioxide and 21% of nitrogen oxide emitted by all power plants statewide. Because EPA is responsible for reviewing and vetoing any permit that violates the law, the New York Public Interest Research Group (NYPIRG) petitioned EPA to veto the permits. After EPA denied NYPIRG's request, Earthjustice filed a lawsuit on behalf of NYPIRG in the U.S. Court of Appeals for the Second Circuit.

Under Title V of the Clean Air Act, major air pollution sources such as power plants, incinerators, and large factories must obtain a permit that governs their day-to-day operations. This Title V permit must include all air pollution limits that apply to the facility, as well as monitoring, recordkeeping, and reporting requirements that will assure the facility's compliance with those limits. In addition, a permit issued to a facility that is already violating an air pollution limit must include a "compliance schedule" consisting of enforceable measures designed to bring the facility into compliance.

Prior to issuing permits to the Huntley and Dunkirk plants, the New York DEC had already issued a "notice of violation" to the plant owners declaring that the plants had been violating air pollution limits for many years. Yet DEC issued the permits without including the relevant emission limits, or a compliance schedule that would bring the facilities into compliance with those limits.

In a settlement entered last January between the New York DEC and NRG Energy—owners of the two power plants—NRG agreed to reduce pollution levels from the plants significantly. However, that settlement was entered without utilizing Title V procedures, which ensure that the public has an opportunity to evaluate the agreed-upon compliance measures and challenge those measures if they find them to be inadequate.

According to the Court: "It is laudable that the parties have reached a settlement that significantly reduces emissions. But because that agreement does not erase the very real dispute between NYPIRG and the EPA over the Congressionally authorized method for enforcement of the Act, our conclusions are unaffected by that settlement. The EPA may choose to enforce the Act by any additional channels it deems strategic, but an enforcement proceeding does not relieve the EPA of its obligations under the permitting process."

29. State and Local Regulators Push For Mercury Pollution Cuts

State and local air regulators unhappy with the Bush administration's approach to mercury pollution have offered a competing plan that would require coal-burning power plants to cut mercury emissions more deeply and more quickly and would raise home electric bills throughout the East and Midwest about a dollar a month.

Their plan would require utilities to reduce their combined 48 tons a year of mercury pollution by 80 percent by 2008, and by 90 percent to 95 percent by 2012. It relies on state-of-the-art technologies such as injectors that feed activated carbon dust into the exhaust vents. The carbon attracts mercury particles, which are filtered out.

Forty percent of all U.S. mercury pollution comes from coal-fired power plants. Mercury, a neurotoxin, concentrates in fish and poses the greatest risk of nerve damage to pregnant women, women of childbearing age and young children.

A new rule adopted by the Environmental Protection Agency in March set a nationwide cap on mercury pollution and put a ceiling on allowable pollution for each state starting in 2010. The agency said it aimed to cut mercury pollution by 70 percent by 2018, but lets individual plants avoid cleanups by buying pollution allowances from plants well under the allowable limits. As a result, the EPA estimated, utilities could realistically be expected to cut their mercury pollution in half by 2020, down to 24.3 tons. Deeper cuts would take a few more years. The EPA estimated its plan would cost utilities and users of electricity $750 million a year by 2020.

The twin trade groups for the State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials said their "model rule" for states to adopt would add $1 a month to the average household's utility bills.

States can adopt their own plans for reducing mercury pollution as long as they surpass federal standards.

30. New Jersey Votes to Clean Up Diesel Pollution

New Jersey voters delivered a strong mandate to cleanup diesel emissions, approving Ballot Question Number 2. With 56% percentage of state-wide ballots tallied, the question received 54% approval, with only 46% voting against the measure.

Last spring, New Jersey Public Interest Research Group (NJPIRG), joined by the New Jersey Environmental Federation, the New Jersey Environmental Justice Alliance and the Sierra Club of New Jersey worked with legislative sponsors to craft and pass the bill that put Ballot Question 2 on the ballot. The bill and the ballot measure were also supported by the American Lung Association of NJ, the New Jersey Education Association, the American Heart Association, and the New Jersey Conference of the NAACP, the March of Dimes and GreenFaith.

“Diesel exhaust is of particular concern because people are often close to the sources – the diesel engines in school buses, trucks, other vehicles and construction equipment,” said Dr. Robert Laumbach, M.D., MPH, CIH, from the Environmental and Occupational Health Sciences Institute at UMDNJ-Robert Wood Johnson Medical School.

In the days leading up to Election Day, NJPIRG citizen members joined NJPIRG staff in over 20 locations to get the word out in their towns about Ballot Question 2 and to urge their neighbors to vote “Yes.” NJPIRG staff and volunteers also manned 10 polling places across the state to pass out educational literature and urge voters to support the Ballot Question.

Voter approval of Question 2 will ensure an estimated $160 million over ten years is available to retrofit over 30,000 of the state’s transit buses, school buses and publicly owned trucks with pollution control technology. Voter approval also ensures funding to support the Department of Environmental Protection’s (DEP) anti-idling enforcement program and will cover the cost of a research project conducted by the DEP to examine

further steps needed to protect children from diesel school bus emissions. The clean up plan would reduce diesel soot emissions by roughly 10 percent over the next decade, removing over 400 tons of pollution from the air annually.

New Jersey's dirty diesel vehicles contribute to the state's unhealthy levels of soot pollution. Thirteen of the state's 21 counties exceed levels for soot pollution allowed under standards established by the EPA. The EPA projects that 880 people die prematurely each year from exposure to diesel soot pollution alone.

31. Arkansas-to-California Caravan Highlights Clean Diesels

A caravan of 50 environmentally friendly school buses built by IC Corporation, North America's largest school bus manufacturer, is traveling to San Francisco from the company's plant in Conway, Ark. The school buses are powered by International Green Diesel Technology(R) engines – a solution that significantly reduces emissions and improves air quality.

"Watching these 50 Green Diesel Technology school buses leave the plant and travel across America provides our employees with a real sense of accomplishment," said Michael Cancelliere, vice president and general manager, IC Corporation. "It's a testament that customers are confident in our proven emissions technology. We strive to build the best school buses that protect passengers, deliver reliability, and help keep the environment cleaner by reducing emissions."

The school buses, outfitted with International(R) DT 466 diesel engines, departed the IC Corporation school bus plant in Conway at 8 a.m. on Wednesday, November 9th to be delivered to a school bus customer in San Francisco.

The caravan is expected to be about five miles long and will include an International fueling tanker carrying ultra-low-sulfur fuel to refuel the school buses. Ultra-low-sulfur fuel is a new type of diesel fuel that is in limited supply now, but will become more widely available in late 2006. It is available today under special arrangements between fuel suppliers and customers in the states of Washington and California where municipalities and school districts are the primary users.

Built on International's extensive research, development, real-world testing and sales of low-emitting diesel solutions for the past five years in California, Green Diesel Technology engines utilize a diesel particulate filter and ultra-low-sulfur diesel fuel, eliminating visible emissions and odor from diesel-powered school buses. The advantages of replacing the existing school buses with buses outfitted with International Green Diesel Technology engines include:

- 90 percent reduction in hydrocarbons and particulate matter emissions
- Smokeless, odorless emissions

International Green Diesel Technology engines are the wave of the future, having already met the U.S. Environmental Protection Agency and California Air Resources Board 2007 requirements for particulate matter and hydrocarbons. Green Diesel Technology engines consist of two things: a catalyzed diesel particulate filter and ultra-

low-sulfur fuel. The fuel is the enabler for the use of the filter resulting in emissions reductions.

32. EPA Rule Eases Ultra-Low Sulfur Diesel Transition

To facilitate the transition to ultra-low sulfur diesel fuel (ULSD), EPA is providing a 45-day extension for terminals and retail outlets to comply with the 15 ppm standard, moving the retail compliance date to Oct. 15. During this extended transition period, diesel fuel meeting a 22 ppm level can be marketed as ULSD at the pump. The agency said it does not expect to adjust the schedule again.

This 45-day extension does not affect the start date for refineries to be producing ULSD fuel. The reason for the extension is that some in the fuel distribution industry had indicated that on the current schedule, ULSD may not be available at a small number of retail outlets. The impacts of the recent Gulf Coast hurricanes are not a factor in the action.

The revised transition dates will cause some manufacturers of diesel engines and vehicles to delay their introduction of the 2007 models that must use ULSD exclusively. However, because these changes will help ensure the universal availability of ULSD, the engine and vehicle industry has indicated that these limited changes are acceptable.

The direct final rule helps ensure that the full environmental benefits of this historic Clean Diesel Program will be achieved.

33. Canada Proposes Amendments To On-Road Motorcycle Emissions Standards

On November 5th, Environment Canada published proposed regulatory amendments that would further align Canada's standards for smog-creating emissions from on-road motorcycles with those in the United States. The proposed amendments to the On-Road Vehicle and Engine Emission Regulations would establish new standards for motorcycles with engines smaller than 50 cubic centimeters in line with U.S. rules, the department said in a regulatory impact analysis statement published with the proposed amendments in the Canada Gazette.

The amendments would also promote alignment with U.S. standards by permitting averaging of motorcycle emissions on a corporate fleet average basis, and by giving small-volume manufacturers greater flexibility in meeting emissions standards, it said.

"The option of retaining the current standards does not take advantage of the opportunity for continued reductions in motorcycle emissions and would not be fully consistent with the policy of aligning Canada's emission standards with those of the United States," it said.

The current regulations incorporate U.S. technical emissions standards by reference to the U.S. Code of Federal Regulations, so new standards implemented by the U.S. Environmental Protection Agency for 2006 and later model year on-road motorcycles in

classes I to III are automatically incorporated as Canadian standards, the department said.

However, current Canadian regulations do not set limits to control emissions from motorcycles with engine displacement of less than 50cc, so the proposed amendments would change the definition of "motorcycle" to remove the existing exclusions for vehicles with engine displacement of less than 50cc and vehicles that cannot start from a dead stop using only the engine, it said. "This will ensure that the scope of on-road motorcycles subject to emission standards continues to be aligned with the United States," it said. "Consistent with the new U.S. rule, vehicles with a displacement of less than 50cc will be considered to be 'Class IA' motorcycles, with a useful life of five years or 6,000 kilometers, whichever comes first."

Also in response to changes being implemented by the EPA, Canada is proposing to adopt provisions to permit companies to meet applicable 2006 and later model year emissions standards for motorcycles on the basis of Canadian corporate fleet average emissions, Environment Canada said. The averaging provisions are based on those of the United States, but include slight differences to specifically recognize U.S. certified vehicles that are sold concurrently in both countries, it said.

The proposed amendments also take into account U.S. rules providing new compliance flexibility for manufacturers and importers of motorcycles with fewer than 500 employees worldwide and fewer than 3,000 motorcycle sales in the United States per year, the department said. The Canadian regulations would be amended to provide similar flexibility, but with the sales limit on annual sales volume reduced to 200 to reflect the proportional size of the Canadian motorcycle market, it said.

Environment Canada noted that Canada's emission standards for on-road motorcycles have not been changed in many years, and without stricter standards total emissions from motorcycles are projected to increase between 2004 and 2020.

Combined with projected decreases in emissions from light- and heavy-duty vehicles and trucks caused by the introduction of cleaner vehicles in response to more stringent regulations, the percentage contribution of motorcycles would increase between 2004 and 2020 from 0.3 to 1.8 for volatile organic compounds, 0.1 to 0.5 for carbon monoxide, and 0.1 to 0.8 for nitrogen oxides, the department said.

"While total emissions from motorcycles are expected to remain considerably lower than the contribution of light- and heavy-duty vehicles, motorcycle emissions can be an important source of air pollution, given that these vehicles are often used in urban areas during periods of warm weather associated with the formation of ground-level ozone and smog," it said.

The proposed amendments are open to 60 days of public comment.

34. Unlikely Group Supports Senate Oil-Saving Plan

Efforts to stem America's appetite for oil, nearly two-thirds of it imported, is getting new attention in Congress with a push from an unusual coalition of environmentalists, evangelical Christians and conservatives. The diverse groups are putting pressure on

lawmakers to find ways to curtail oil use, especially in transportation, and to promote alternative fuels and new technologies less depended on fossil fuels.

Environmentalists view reduced oil use as a way to curtail pollution and lower the risk of climate change. A number of conservatives and others argue the dependence on oil imports poses a security threat.

Both liberal Democrats and conservative Republicans in Congress are listening.

A bipartisan group of senators planned to unveil legislation they say would save 2.5 million barrels of oil a day within a decade and 10 million barrels a day by 2031. The country now uses a little over 20 million barrels of oil a day, most of it for transportation.

The legislation would include tax breaks, as much as 35 percent, and loan guarantees to get automakers to switch from producing gas guzzlers to gas-electric hybrids, advanced diesel or other alternative technologies. It also includes new tax breaks for those who buy such vehicles for car fleets, and incentives for developing alternative fuels such as ethanol from cellulosic biomass, research into use of lightweight material in cars, and the promotion of mass transit corridors.

Earlier this year, Democrats tried to include a provision in a broad energy bill that later was signed into law by President Bush, that called on the president to develop programs that would cut oil consumption by 1 million barrels a day. It was opposed by the GOP majority and defeated.

Among those supporting the new Senate initiative are environmentalists such as the Natural Resources Defense Council and the Apollo Alliance, a coalition of labor and environmental groups. But they have been joined by mix of neo-conservatives and members of the Christian right who view the country's continued dependence on foreign oil -- especially from volatile areas such as the Middle East -- as a threat to the nation's security, and in the view of some, American values. Among those arguing forcefully that the country's dependence on foreign oil poses a security risk are former CIA Director James Woolsey and Robert McFarlane, former national security adviser to President Reagan.

A number of conservatives have formed a coalition called Set America Free which advocates a diversification of motor fuels, development of more fuel efficient cars and trucks especially hybrids, and increased research into the development of ethanol from cellulosic biomass. Among the group's members are Gary Bauer, president of American Values; Frank Gaffney of the Center for Security Policy, and Gal Luft, director of the Institute for the Analysis of Global Security.

35. EPA Adopts Amendments to Aircraft Engine Emission Standards

EPA is amending its existing emission standards for nitrogen oxides (NOx) for new commercial aircraft engines. Nearly all aircraft engines previously certified or in production already meet or exceed the new, more stringent standards, which will apply to engines used on commercial aircraft for small regional jets, single-aisle aircraft, twin-aisle aircraft, and 747s and larger aircraft. General aviation and military aircraft using commercial aircraft engines subject to this rule will also contribute to NOx emission

reductions. The action will bring the United States aircraft standards into alignment with international standards, which became effective in 2004.

36. Minor Changes Made to EPA Fuel Additive Program

The gasoline deposit control program, established in July 1996 to ensure U.S. gasoline supplies contain detergent-like additives to reduce tailpipe emissions, has been amended to improve compliance and maintain the environmental benefits of the program. The minor revisions include clarification of maximum concentration levels of fuel deposit control additives and changes to reporting requirements. As a result of this program, vehicle emissions of carbon monoxide, hydrocarbons, and nitrogen oxides have been reduced by more than 595,000 tons annually.

37. S. Bronx Air Pollution, Asthma Linked - Study

A five-year study of air quality in the South Bronx has confirmed what many have long suspected - the large number of highways and industrial facilities there exposes residents to more pollution than other New Yorkers. While environmental advocates and elected officials have said as much for years, New York University's South Bronx environmental health and policy study offers scientific evidence.

In the South Bronx, 17% of school-age children have asthma, a rate twice the city average and three times the national average, according to the study.

In 1999, Rep. José Serrano (D-South Bronx) enlisted NYU's School of Medicine and Wagner Graduate School of Public Service - along with the Point Community Development Corp., Sports Foundation, We Stay/Nos Quedamos and Youth Ministries for Peace and Justice - to study how local air quality is related to factors such as the number of waste-transfer stations and car/truck traffic.

The NYU team used a mobile van lab to measure ground-level pollution levels at eight sites, including Public School 154, Middle School 302, Community School 152 and MS 201. They also tested air samples collected by students with instruments in special wheeled book bags.

The study found a strong correlation between asthma hospitalization rates, poverty, the percentage of Hispanic residents and the number of industrial facilities in the Bronx, with Hunts Point having by far the highest number and density of industrial facilities.

In areas where school-based asthma rates are as high as 20% to 25%, the study suggested that children would particularly benefit from air conditioners or filters in the classrooms to reduce the effect of diesel fumes from nearby highways.

38. Hybrids and Diesels Competing For Efficiency Market

Because fuel cell vehicles are so far off, and because automakers need a midterm strategy to reduce consumption and lower emissions, gasoline-electric hybrids moved

into the lead this year as the quickest and least expensive way to achieve those goals in the US. The new generation of clean-running diesels will be another fuel-saving powertrain available in North America, but not until 2007 or 2008.

Gasoline-electric hybrids will account for slightly less than 200,000 of the roughly 17 million vehicles expected to be sold in the United States for 2005. But most major automakers have or will be investing in the technology and launching hybrid models starting next year.

GM, BMW AG and DaimlerChrysler AG formed a partnership that will see all three companies use a dual-mode hybrid system with two electric motors that reduces fuel consumption in both city and highway driving. The powertrain will be used in SUVs starting in 2008.

Ford Motor Co., fresh off the success of its Escape Hybrid SUV in the United States, launched a Mercury version called the Mariner and said it will boost hybrid production to 250,000 units in five years. The next hybrids from Ford will be the Fusion and Mercury Milan compact sedans.

Toyota Motor Corp., the leader in hybrid sales, plans to raise global production to 1 million units a year by 2012. Toyota sold about 135,000 hybrids worldwide in 2004.

Diesels will return to North America in significant numbers starting in 2008. Low-sulfur diesel fuel will be introduced in the United States in late 2006. DaimlerChrysler, BMW, GM and Ford will meet strict new emission regulations that require diesel engines to run as cleanly as gasoline engines.

DaimlerChrysler already has confirmed that diesels are slated for several U.S.-bound Mercedes-Benz models starting in 2008. The Chrysler group has been successful selling the diesel version of the Jeep Liberty; Chrysler also could get a diesel-powered Chrysler 300 sedan and Jeep Grand Cherokee SUV.

39. Distinguished Professor Named Chief Of Air Board

Three months after his last appointee was rejected by the state Senate as too pro-business, Gov. Arnold Schwarzenegger has named a highly respected Berkeley air pollution expert as chairman of the California Air Resources Board. Robert Sawyer, a University of California professor emeritus on energy, was on the board once before in the mid-1970s and has spent nearly 30 years teaching and doing research on pollution and related topics.

"We're really pleased with him," said Bonnie Holmes-Gen, vice president for government relations of the California chapter of the American Lung Association.

"He has an extensive background. He's the kind of chair we hoped the governor would pick," Holmes-Gen said. "Bob Sawyer is somebody with the kind of international reputation that befits the chair of this very important agency."

The 70-year-old Sawyer, a Democrat who served on the air board under Gov. Jerry Brown from 1975-76, takes a position Schwarzenegger had tried to give earlier in the year to Cindy Tuck, a Sacramento lawyer.

In a press release announcing the appointment, Schwarzenegger called Sawyer "an exceptionally accomplished scientist, teacher and environmental policy expert who has devoted his career to using science and technology to improve air quality not only in California but across our country and the world."

He's currently a partner in his own pollution-control consulting firm and a visiting professor at University College London. The school's Web site says he wrote more than 320 technical publications, including two books, and has been listed in American Men and Women of Science, Who's Who in Technology, Who's Who in Engineering and Who's Who in Science and Engineering.

Sawyer, who lives in Oakland, earned a doctoral degree in aerospace science from Princeton University and a master's of science and bachelor's of science in mechanical engineering from Stanford University. The Republican governor's choice of Democrat Robert F. Sawyer — a UC Berkeley emeritus energy professor who has been active on air-quality issues for decades — is not expected to generate any significant opposition from environmental groups or the Legislature.

"I am honored Gov. Schwarzenegger has asked me to serve as chair of the world's leading air-quality regulatory organization and look forward to the opportunity to work with him in meeting the continuing challenges of reducing air pollution in California," Sawyer said in a written statement.

In addition to his teaching work at Berkeley over nearly four decades, Sawyer has served as an advisor to the World Bank on Mexico City air pollution and is a partner in an air-quality consulting firm.

Environmentalists cheered Sawyer's selection, calling him exceptionally qualified. Sawyer had reportedly given technical advice to environmental groups on the greenhouse gas rule. "Terrific appointee, terrific gentleman," said V. John White, a veteran Sacramento environmental lobbyist. "He is the type of person who could serve with honor and distinction in any administration. He knows it all, because he has been a part of the history. He has trained a generation of air-pollution engineers."

40. EPA Announces Weak PM Standard

EPA has proposed revisions to its national air quality standards for fine particle pollution (also called fine particulate matter) and from some coarse particles. The proposed revisions will address two categories of particulate matter: fine particles which are particles 2.5 micrometers in diameter and smaller; and "inhalable coarse" particles, which are particles between 2.5 and 10 micrometers (PM10-2.5).

The main provisions of the proposal are:

PM2.5 24 Hour Standard: The standard limiting daily concentration of fine particles below 2.5 µm would be tightened to 35 µg/m3, from the current 65 µg/m3.

PM2.5 Annual Standard: The current PM2.5 standard of 15 µg/m3 remains unchanged.

PM10–2.5 24-hour standard: A daily standard of 70 µg/m3 is proposed for particles between 2.5 and 10 µm. The new PM10–2.5 category would include coarse particles that come from sources typically found in urban areas, such as high density traffic on paved roads, industrial sources and construction activities. The standard would not cover coarse particles from such sources as windblown dust and soils, agricultural or mining sources.

PM10 24-hour standard: The current daily PM10 standard of 150 µg/m3 would be revoked, except in urban areas with a population of 100,000 or more.

The proposed standards are weaker than the recommendation of the EPA's Clean Air Scientific Advisory Committee. The EPA staff paper of June 2005 called for a stronger fine particulate limit of 14 to 13 µg/m3, and for a daily limit of 35 to 30 µg/m3.

Health and environmental groups, including the American Lung Association, had called for an even stronger annual standard of 12 µg/m3, equal to standards adopted by California and to limits recommended by some Northeast states.

The current PM2.5 standards were adopted in 1997, but due to legal challenges the enforcement started only in 2004. Ambient PM10 standards were first adopted in 1987.

The EPA is required by a consent decree to issue a final rule for the particle pollution standards by 27 September 2006.

In a separate but related action, EPA proposed amendments to its national air quality monitoring requirements, including those for monitoring particle pollution. The changes will help EPA, states and local air quality agencies in their efforts to improve public health protection and inform the public about air quality in their communities, and they will allow air quality regulators to take advantage of improvements in monitoring technology.

The agency will take public comment for 90 days following publication of the proposal in the Federal Register and will hold three public hearings.

The Clean Air Act requires EPA to periodically review air quality standards to ensure they provide adequate health and environmental protection and to update those standards if necessary. EPA last updated the particle standards in 1997. This proposed rule covers only the air quality standards for particle pollution. It does not address all of the issues involved in implementing a new standard, such as designating what areas are or are not attaining any new standard, and determining the best and most cost-effective implementation strategies. EPA and the states will address those in later actions.

This was a major opportunity for EPA to set new standards that reflect the new health science and protect public health. Unfortunately, EPA chose to ignore the Clean Air Act Scientific Advisory Committee (CASAC) and its own staff scientists and propose a standard higher than the recommended range. This appears to be another instance where political science has trumped health science. It appears that EPA has tried to set a standard that is consistent with the reductions required by the so-called Clear Skies

Initiative - CAIR, Hg, NSR roll backs, etc, rather than consistent with the science. As noted by the American Lung association:

- There are over 2,000 peer-reviewed studies published since the old (1997) PM 2.5 NAAQS was set linking particle pollution to illness, hospitalization and premature death. Many show adverse health effects at exposures well below the old standard (15/65 μ/m3 annual/daily).
- EPA must pick a new PM2.5 standard that protects "vulnerable groups" including the elderly, children, and people with heart and lung disease and diabetes from particle pollution well below the current (1997) standard.
- EPA's proposed standard of 15/35 is little more than a "paper" reduction, increasing the number of people protected by 15%(from 56 million to 65 million) when three times as many(165 million) live in areas with PM concentrations above levels research shows can adversely affect health.
- EPA's preferred standard of 15/35 is higher than the range recommended by its own independent advisory committee of experts on the Clean Air Scientific Advisory Committee (CASAC). This is unprecedented and fails to follow the path provided by "sound science".
- A new more protective PM2.5 NAAQS can be implemented in a fashion that requires states to phase-in additional emissions reduction programs after those needed to meet the old (1997) PM 2.5 standard.

41. CARB Moves to Reduce Emissions from Goods Movement Activities

The California Air Resources Board (ARB) has adopted two measures that will greatly reduce emissions from activities related to moving goods into and out of California. Both rules are the first of their kind in the nation.

The first controls emissions from mobile cargo handling equipment such as yard trucks and forklifts that operate at ports and intermodal rail yards. It is expected to reduce diesel PM emissions by 690 tons and NOx emissions by 19,000 tons between 2007 and 2020. These reductions will occur in areas near ports and rail yards, areas where emissions have significant impact on nearby communities. The regulation calls for the replacement or retrofit of existing engines with ones that use Best Available Control Technology (BACT), and will require, beginning January 1, 2007, that newly purchased, leased, or rented cargo handling equipment limit PM and NOx to very low levels.

In the second action, the Board adopted a regulation to reduce emissions of diesel PM, NOx, and sulfur oxides (SOx) from the use of auxiliary diesel engines and diesel-electric engines operated on ocean-going vessels located within California waters. Auxiliary engines provide electric power which is used to provide lighting, cooling and on-board power for navigation equipment. Some vessels, principally cruise ships, also use these engines to run large electric motors that propel the vessel.

Reductions will be accomplished through the use of cleaner burning marine distillate fuels or equally effective emission controls. The regulation is expected to yield immediate emission reductions upon implementation in 2007. Specifically, for the nearly 75 percent of vessels now using heavy fuel oil in their auxiliary engines, compliance with

this measure will result in an estimated 75 percent reduction in diesel PM, 80 percent reduction in SOx, and 6 percent reduction in NOx. Between 2007 and 2020, it is expected to reduce diesel PM emissions by more than 23,000 tons, NOx by 15,000 tons, and SOx by 200,000 tons.

42. U.S. Announces $94 Million Clean Air Act Settlement with Chrysler

The United States has reached a settlement with DaimlerChrysler Corporation (Chrysler) to repair defective emission controls on nearly 1.5 million Jeep and Dodge vehicles from model years 1996 through 2001, the Justice Department and the Environmental Protection Agency (EPA) have announced. The agreement also settles allegations that the company violated the Clean Air Act (CAA) by failing to properly disclose defective catalytic converters installed on the affected vehicles. In settlement, Chrysler has agreed to:

- Extend the warranty on the catalytic converters installed on approximately 700,000 of the vehicles involved, and for another 300,000 vehicle owners, send notification of the catalytic converter problem which will be covered under the original emissions system warranty under the CAA;
- Recall approximately 500,000 of the vehicles to fix a separate defect in the on-board diagnostic (OBD) system installed on the vehicles and to check the catalytic converters on the recalled vehicles; and
- Implement enhanced emission-related defect reporting procedures.

The total estimated cost to Chrysler to implement the settlement is $90 million. In addition, Chrysler will pay penalties of $1 million and will spend at least $3 million to implement a supplemental environmental project to reduce emissions from diesel engines currently in use, making this the largest settlement yet for an emission-related defect reporting case. Chrysler will pay another $1 million to California as part of a parallel administrative settlement agreement with the California Air Resources Board (CARB), and will provide similar remedies for California-certified vehicles with the catalyst or OBD defects.

The lawsuit is the result of a joint EPA-CARB investigation of Chrysler's 1996 through 2001 Cherokees, Grand Cherokees, Wranglers, Dakota trucks, and Ram vans, wagons, and pickup trucks. The investigation disclosed that a significant percentage of the vehicles experience excessive deterioration or failure of the catalytic converter. The deterioration of the catalytic converters in the named models results from a design defect in the original converter installed on each of the vehicles. As a result of this design defect -- in some of the identified Chrysler vehicles -- the internal components of the converter move around excessively, causing the device's ceramic core to break up. The result is that the catalytic converter loses its ability to treat harmful pollutants. Most owners experience a rattling noise from the underside of their vehicle as the catalytic converter deteriorates. The EPA-CARB investigation also disclosed that the OBD system installed on certain of the 1996, 1997, and 1998 model year vehicles -- which should have detected the catalytic converter problem and illuminated the dashboard "check engine" light -- may not function properly, leaving some owners unaware of the problem.

Under the settlement, Chrysler will notify approximately 700,000 owners of certain 1996-1999 model year Jeeps, Dodge Ram, and Dodge Dakota vehicles that the catalytic converter warranty on their vehicles is being extended to 10 years or 120,000 miles. All of these vehicles will also be covered for at least one year without mileage limitation and for 2 years if the vehicle fails a state emissions inspection due to a defective original equipment catalytic converter. An extended catalytic converter warranty will also be provided to 6,100 non-California model year 2000 heavy-duty Dodge Ram trucks to cover them for at least 12 months without mileage limitation.

Chrysler will also send notices to approximately 300,000 owners of the affected vehicles informing them of the potential catalytic converter failure and reminding them that their original catalytic converters are still covered by the original 8-year/80,000-mile warranty. Owners of the remaining 500,000 vehicles will receive a recall notice for repair of the defective OBD system on their vehicles. For those recalled vehicles, the catalytic converter will be inspected and repaired if found to be defective.

Chrysler will also establish procedures to reimburse owners of vehicles covered by the settlement's extended warranty or recall provisions who, before receiving Chrysler's notice of the remedial measures announced today, paid out of their own pockets for the repair or replacement of a defective original equipment catalytic converter.

43. Detroit Diesel Recalls Turbochargers and Diesel Particulate Filters

Vehicle and engine manufacturers are required to design and build their vehicles and engines to meet emission standards for the useful life of the vehicle as specified by law. Under Section 207 of the Clean Air Act, if EPA determines that a substantial number of vehicles in a class or category do not meet emission standards in actual use even though they are properly maintained and used, EPA can require the manufacturer to recall and fix the affected vehicles.

If EPA formally notifies and requires the manufacturer to conduct a recall this is termed an "ordered recall." A second and most common type of recall are "voluntary recalls" and are initiated voluntarily by manufacturers once a potential noncompliance is discovered. The third type of recall are "influenced recalls" that are voluntary recalls which are directly influenced via EPA in discussions with manufacturers. DDC's action is an influenced recall.

Description of Problem:

The compressor wheel and turbine wheel of the turbocharger experience fatigue failures which cause poor or non operation of the engine and bus.

The diesel particulate filters (DPFs) fail to regenerate and plug with particulate matter, thus requiring frequent cleaning to remove the accumulated soot.

Repairs:

The turbochargers will be replaced with the most current, improved version.

The DPFs will be replaced with a new particulate filter designed to minimize soot accumulation associated with these bus applications.

Models/Engines Affected:

2001 through 2004 model year DDC Series 50, 8.5 liter, diesel-fueled, 275 and 330 horsepower (hp), urban bus engines

Number of Vehicles:

257 2001 and 2002 model year, Series 50, 8.5 liter, 330 hp engines will receive turbocharger replacements.

584 2003 and 2004 model year, Series 50, 8.5 liter, 330 hp engines will receive improved diesel particulate filter replacement and turbocharger replacements.

409 2003 and 2004 model year, Series 50, 8.5 liter, 275 hp engines will have improved particulate filters installed

A total of 1,250 urban bus engines are affected.

California Vehicles:

Models built to California emission standards will be handled separately by California Air Resources Board, owners notified near the same time.

44. International Issues Update on 2007 Emissions Plans

International Truck and Engine Corporation, the operating company of Navistar International Corporation has provided an update on its plans and progress toward development of 2007 emissions-ready trucks and engines, including its goals for product testing, its technology path and expected price increases.

Dee Kapur, president of the company's truck group, said that an industry media briefing was part of a plan to ensure that "our customers can make informed decisions about their business" with 2007 quickly approaching and customers already scheduling orders in the third and fourth quarters.

"International is building on its years of experience with Green Diesel Technology(R) vehicles to implement evolutionary changes in our products to meet 2007 standards," said Kapur. "In doing so, our goals are to provide International and IC Corporation customers with the highest reliability, serviceability and performance."

International announced as part of the briefing that it is focused on achieving comparable performance to what its customers see today and is conducting the largest field test in its history to help achieve that goal.

"Our goal for testing is to obtain robust data on all areas that affect the performance of our integrated truck and engine solution and with our engine suppliers, including power levels, fuel economy, durability, reliability, and maintenance intervals," said Phil

Christman, vice president, product creation. "This involves extensive winter testing and ensuring we have trucks in customers' hands in a wide variety of applications. We will be testing performance in millions of miles."

International released preliminary information on both pricing and fuel economy, noting it was working on minimizing the impact of both on its customers. Prices for International mid-range diesel powered trucks and IC buses are estimated to increase $5,000 to $6,000 per vehicle while for International Class 8 truck/tractors with supplier engines, the estimates range from $7,000 to $10,000. Additional charges will apply with certain engines where higher horsepower requires dual after treatment.

The anticipated price increases in the cost of new trucks are the results of more stringent federal exhaust emissions standards that go into effect in 2007.

"We are supporting incentives to mitigate these price increases through our work with the American Trucking Associations (ATA)," said Patrick Charbonneau, vice president, government relations. "The ATA is engaged in discussions with a number of elected officials to give customers a five percent tax credit on Class 8 trucks containing the new engines."

Based on current tests of International engines, fuel economy degradation currently is estimated beyond the 1 percent expected through the use of ultra low sulfur fuel. Christman said International is also focused on maximizing fuel economy to close the gap.

For its family of mid-range engines, International will be optimizing exhaust gas recirculation (EGR), and using proven air management and fuel injection systems in addition to a diesel particulate filter based upon six years of Green Diesel Technology vehicle development.

International also noted it is closely collaborating with its engine suppliers, Caterpillar and Cummins, both of which will be using cooled EGR strategies, for the 2007 solutions in its Class 8 trucks.

45. States Continue to Move Toward Lower Greenhouse Emissions

A. Oregon

Oregon has become the 11th state to follow the lead of California on vehicle emissions. The five-member commission governing the Department of Environmental Quality unanimously voted Thursday to implement new rules on vehicle emissions standards. Public hearings are expected to follow in the first half of next year, before the move is finalized in a second vote by the commission.

The move happened in time for automakers to meet the requirements for vehicles that will be produced in 2009.

The issue has become controversial, with industry critics suggesting that manufacturing vehicles to meet the tightened standards will result in costs that are onerous for

consumers and business. Industry officials filed a lawsuit in September against DEQ to block adoption of California's standards. That complaint, filed in Marion County Circuit Court and pending before a judge, asserts that legislators blocked any attempt to establish the California standards. A preliminary ruling is expected in mid-January.

California standards require that most passenger vehicles and light duty trucks manufactured for sale in the state produce roughly 30 percent less carbon dioxide in 2009 than models available today.

Research by California officials suggested more stringent standards could incrementally increase vehicle prices by $1,000 to $3,000. That cost would be offset by increased fuel efficiency, a byproduct of the tougher standards. Gasoline priced at $1.74 per gallon would equate to a monthly savings of about $5. If gas prices climbed to $3 per gallon, the savings would be more like $20 per month, according to DEQ.

B. Rhode Island

Rhode Island has adopted new standards to cut vehicle emissions of greenhouse gases -- which are believed to be a leading cause of global warming. The new amendments mean that for the 2009 model year, cars sold in Rhode Island will need to adhere to rules that seek to reduce carbon dioxide emissions by increasing fuel efficiency.

Several other Northeast states have said they're committed to the tighter rules. Vermont became the first of the Northeast states to adopt the standards last month.

Last December, Rhode Island adopted California's standards to reduce emissions of gases believed to cause smog for new vehicles sold in the state beginning with model year 2008.

C. Connecticut and Other Northeast States

Gov. M. Jodi Rell joined leaders from six other Northeastern states in signing the Regional Greenhouse Gas Initiative, the first multistate agreement in the nation to cut greenhouse-gas emissions from power plants. Also on that day, the General Assembly's Regulations Review Committee adopted stricter anti-pollution regulations - based on so-called "California standards" - for new cars and light trucks sold in the state four years from now.

The Regional Greenhouse Gas Initiative, negotiated over a two-year period, is an agreement among seven states: Connecticut, Maine, New Hampshire, Vermont, New York, New Jersey and Delaware. It caps power-plant emissions at current levels - 150 million tons of carbon dioxide a year - starting from 2009 to 2015. By 2020, power plants will have to cut their emissions by another 10 percent. The initiative also creates a market for greenhouse gases by allowing utilities that are meeting these standards to sell "credits" to utilities that are not.

The vehicle-emission regulations also target greenhouse gases. Under these rules, vehicles sold in Connecticut starting with the 2009 models will have to reduce emissions of carbon dioxide, methane, nitrous oxide and hydrofluorocarbons by 30 percent as of

2016. Connecticut joins 10 other states that are leading the nation with these tougher, meaningful standards for vehicle emissions.

Taken together, these strategies for curbing greenhouse gases underscore Connecticut officials' resolve to improve the state's air quality, reduce its dependence on fossil fuels and shape a more secure economic future.

46. EPA Rule Aligns Emissions Standards For Aircraft With International Norm

A final rule issued on November 17th by the U.S. Environmental Protection Agency reduces standards for nitrogen oxide emissions from new jet aircraft engines by 16 percent. The rule amends existing standards for aircraft engines to conform to standards adopted by the United Nations International Civil Aviation Organization (ICAO) in 1999, and to bring U.S. aircraft standards in line with international standards. Implementation of the ICAO standards began in 2004.

EPA said most engine manufacturers are already complying with the ICAO limits, so the EPA rulemaking will have little impact on them.

The standards apply to jet engines with a thrust greater than 26.7 kilo-newtons that are designed and certified after the standards go into effect Dec. 19th. These are new-model engines that would be used on small regional jets as well as large commercial aircraft.

According to EPA, aircraft engines contribute about 1 percent of the country's total nitrogen oxide emissions from mobile sources. However, commercial aircraft emissions are a growing segment of transportation-related emissions. This is in contrast to the declining nitrogen oxide emissions from other mobile, as well as stationary, sources of air pollution. According to EPA, flights of commercial airplanes are projected to increase 9 percent by 2010 and 34 percent by 2020 from 2002 levels.

Nitrogen oxides are a key precursor to the formation of ground-level ozone, which EPA links to asthma attacks and premature deaths.

EPA originally issued nitrogen oxide emissions limits for large aircraft engines in 1997. At that time, the agency said the rules would have little effect because the great majority of aircraft engines were already meeting standards set by ICAO. EPA proposed tightening the standards in 2003 in response to the 1999 ICAO standards. The new standard issued Nov. 17 represents a 16 percent tightening of the previous EPA standard.

As long as the aircraft meet minimum ICAO standards, countries participating in ICAO must grant permission for the aircraft of other participating nations to operate in their airspace. Participating nations are required to adopt aircraft emissions standards that are equal to or more stringent than ICAO standards.

47. Ontario Proposes New 'Drive Clean' Rules

On November 18th, Ontario Environment Minister Laurel Broten outlined proposed changes to the province's Drive Clean vehicle pollution testing program to exempt newer, less-polluting vehicles and to increase monitoring of older vehicles.

The proposed changes will be open for public comment until January 17th.

The program currently requires light-duty vehicles that are at least 3 years old to be tested every two years to renew their license plates, but exempts vehicles 20 years old or more. The program will be revised effective Jan. 1, 2006, to undertake testing only when vehicles are five years old, rather than three.

"Data collected in 2003 shows that more than 99 percent of three-year-old light-duty vehicles, such as passenger cars, pick-up trucks, and sport utility vehicles, passed their initial test," it said. "Since light-duty vehicles have a very low failure rate, the estimated loss in reductions of smog-causing chemicals is less than one percent. Similarly, the loss in estimated emissions reductions for heavy-duty trucks and buses is very small, again due to their low failure rate."

The provincial government will also establish an offense under the Environmental Protection Act to make it easier to decertify emissions inspectors who create, distribute, or use false Drive Clean passes, it said. Provincial Auditor Jim Carter had warned in his December 2004 report to the Ontario Legislature that the Drive Clean program was the victim of serious fraud that brought into question its value in reducing emissions. The report cited an audit which found that 3,200 emissions certificates presented as the basis for license plate renewal had been used more than five times each.

The Ministry of Environment also proposed additional changes to the Drive Clean program to require annual testing of vehicles 12 years old or older; to increase from C$450 to C$600 (US$ 510 to US$ 383) the amount vehicle owners are required to spend on repairs after failing an emissions test; to eliminate testing in ownership transfers between family members or when vehicle leases are bought out by the lessee; and to use on-board vehicle computers for testing 1998 and newer vehicles.

The ministry noted that an independent analysis of Drive Clean data showed that the program reduced emissions of nitrogen oxides and volatile organic compounds by a total of 81,200 tons between 1999 and 2003, the equivalent of removing 600,000 typical light-duty vehicles from service. In addition, the analysis estimated that the program has reduced emissions of carbon monoxide by 690,000 tons and carbon dioxide by more than 100,000 tons over the 1999-2003 period, and had reduced particulate matter emissions from diesel heavy-duty vehicles by 1,100 tons between 2000 and 2002.

Drive Clean requirements implemented in January 2003 set a standard for vehicle emissions 11.5 percent lower than the most stringent test standards recommended by the U.S. Environmental Protection Agency, and set standards that were 11.5 percent stricter starting Jan. 1, 2005.

ASIA-PACIFIC

48. Japan CO2 Emissions Inch Down, But Far From Target

Japan made some progress in cutting greenhouse gases last fiscal year mainly due to increased use of nuclear power, but the country fell well short of its target for reducing carbon dioxide (CO2) emissions, the government said. Japan's Environment Ministry said in a preliminary report that the country emitted 1.329 billion tons of gases blamed for global warming in the fiscal year to March 31, 2005, down 0.8 percent from the previous year.

However, the emission volume was 7.4 percent higher than that in 1990. The UN Kyoto Protocol requires Japan to reduce its CO2 emissions by 6 percent from that year's level by 2008-2012.

The government attributed the small decline in CO2 emissions to a recovery in nuclear power plant operation rates, which averaged 68.9 percent last fiscal year, versus the previous year's 59.7 percent.

Still, last year's operation rate was well below normal mainly because of delays to the restarts of nuclear power generators run by Tokyo Electric Power Co. (TEPCO), Asia's biggest utility. A Japanese nuclear power plant usually runs at just above 80 percent of its capacity.

Shutdowns of nuclear power stations have led to increased use of higher-emission fossil fuel plants.

Nuclear plants owned by TEPCO, which is responsible for almost one tenth of Japan's CO2 emissions, have been slow to recover to the normal 80 percent operation level since 2003. In that year, TEPCO was forced to shut all of its nuclear units after admitting it had falsified nuclear safety documents for more than a decade.

In June, TEPCO said it had cut its CO2 emissions by 14 percent in the year to March 2005 to 109.2 million tons from the previous year because the average utilization rate at its 17 nuclear units had recovered to 61.7 percent from 26.3 percent.

The report by the ministry also showed Japan's emissions of hydrofluorocarbons (HFCs) fell 27 percent in the year to March from the previous year, while emissions of perfluorocarbons (PFCs) increased by 9.8 percent. HFCs are a byproduct of the material HCFC often used in refrigerators, and PFCs are typically produced in the semiconductor manufacturing process. Both gases are thousands of times more potent than CO2.

Such increases in CO2 emissions are a dilemma for Kyoto-leader Japan. But they give trading houses and financial institutions opportunities in the emerging CO2 market, which Barclays Capital has predicted could grow to 40 billion euros ($48.5 billion) a year. Japanese trading firms, including top-ranked Mitsubishi Corp. and Mitsui & Co., as well as utilities such as TEPCO have invested in overseas projects to secure CO2 credits for their own use in cutting emissions and for resale to other firms.

49. Japanese Environment Ministry Plans Tax on Fossil Fuels

On October 25th, Japan's Ministry of Environment unveiled what it described as a final environmental tax plan that calls for imposing a tax of 2,400 yen ($21) per ton of fossil fuels for annual tax revenues of 370 billion yen ($3.2 billion). The plan excludes taxation of gasoline, diesel fuel, and jet fuel until retail prices stabilize, and would impose a tax of 1.58 yen per kilogram of coal, 0.82 yen per liter of kerosene used as home heating oil, 1.8 yen per liter of heavy fuel oil, 1.38 yen per cubic meter of gas, and 0.25 yen per kilowatt hour of electricity.

The ministry estimated the tax burden per household would be about 180 yen per month.

The plan calls for introducing the tax in January 2007. It said revenues from the tax should be used for reforestation, energy conservation technology research and development, and other measures to reduce greenhouse gas emissions.

Hiroshi Okuda, chairman of Nippon Keidanren--the Japan Business Federation, known as the country's shadow finance and economic policy planners--said he is opposed to any environmental taxes because they do not contribute to reducing greenhouse gas emissions and hurt Japan's global competitiveness.

The Ministry of Finance in 2004 unveiled a similar environmental tax plan and intended to use the proceeds for social security and environmental measures, but it was struck down amid opposition from Keidanren and other business communities. However, the ministry supports environmental taxes as a means for reducing Japan's rising public sector debts.

50. Singaporeans Want Tougher Labeling, Waste Rules

The vast majority of Singaporeans support labeling schemes that would provide detailed information on the environmental impacts of the appliances and vehicles they purchase, according to the results of a survey conducted by the Ministry of Environment and Water Resources released on October 25th. Two-thirds of the nearly 3,000 people polled from May to August 2005 said they felt the government should do more to reduce greenhouse gas emissions, while over 90 percent expressed support for mandatory energy and emissions efficiency labels for household appliances and vehicles. With product packaging currently representing about one-third of the waste generated in the city-state, 94 percent of those surveyed also said measures should be taken to prompt manufacturers to reduce packaging and minimize waste. The ministry pledged in a statement to take the survey findings into consideration when updating the "Singapore Green Plan" in early 2006. The plan describes national environmental policy through 2012.

51. Chinese Environmental Watchdog Shows Teeth

A top official with China's environmental agency said that the government plans to warn investors away from cities that fail to meet national air quality standards over several years. A blacklist of cities with pollution levels above an unspecified government-set standard will be regularly published, the official Xinhua News Agency said.

The State Environmental Protection Administration "will issue risk warnings to investors who consider investing" in cities that remain on the blacklist for an unspecified number of years, Xinhua said citing Zhang Lijun, the administration's deputy director.

Two decades of rapid industrialization have left China's cities and much of the countryside cloaked in a haze of noxious smog. A sharp rise in private car ownership has added increased levels of vehicle exhaust to the mix.

No timetable was specified for implementing the blacklist or penalty system. The State Environmental Protection Administration, or SEPA, monitors China's environmental quality but has limited enforcement powers.

The report said one-third of China's cities suffer "severe air pollution". China's sulphur dioxide emissions reached 26 million tons in 2004, the worst in the world, Xinhua said.

Zhang made his comments at a symposium on improving China's air jointly sponsored by SEPA, the US Environmental Protection Agency, the Environmental Directorate of the European Commission and the Italian Ministry for the Environment and Territory, Xinhua said.

52. Air Pollution 'Kills 400 000' Annually In China Says Unpublished Study

More than 400 000 people in China die prematurely annually from air pollution, reveals an unpublished study by the research arm of the government's environmental protection agency. Wang Jin'nan said the study, conducted by the Chinese Academy on Environmental Planning in 2003, found that 300 000 people died from outdoor pollution, while 111 000 people died from indoor pollution each year.

Jin'nan was a chief engineer of the academy, which was part of the State Environmental Protection Administration, and was also chairperson of the Chinese Society for Environmental Economics.

Jin'nan" said: It's a conservative figure. The real figure could be higher."

The conference was organized by SEPA as well as the United States Environmental Protection Agency, the environmental directorate of the European Commission and the Italian ministry for the environment and territory.

Jin'nan said the figures had not been made available to the general public because governments, especially at the provincial level, don't want bad publicity about their jurisdiction. China, while pledging to step up measures to fight pollution, didn't reveal statistics on the impact of pollution on health.

The figures in the study reflected World Bank estimates that 400 000 people in China died each year from air pollution-related illnesses, mainly lung and heart diseases.

Jin'nan said coal-fired power plants, China’s main source of energy, as well as polluting factories, and the increasing number of vehicles mainly generated outdoor pollution in China. He said indoor pollution came from the burning of coal, wood or agricultural waste for heating and cooking.

The academy's research also found that one third of China's urban dwellers lived in cities with level two or higher pollution. Jin'nan said level two pollution was considered harmful to health, while level three was considered "very dangerous". Jin'nan said some 116 million people lived in cities with level three pollution.

In a survey of 341 major cities in China in 2003, the academy found that 27% suffered from serious pollution, while 32% had light pollution and 41% enjoyed "good" air quality.

53. China's Five-Year Plan Outlines Steps To Boost Efficiency, Cut Pollution

A draft of China's next "five-year program," which outlines government development goals for the period 2006-2010, includes a wide range of provisions and targets intended to boost energy efficiency, develop renewable energy sources, and reduce all forms of pollution.

The proposed 11th Five-Year Program for National Economic and Social Development was adopted by the Central Committee of the Chinese Communist Party and was published by the official Xinhua News Agency Oct. 18. A final version will be adopted at the next session of the National People's Congress in March.

For the first time, Beijing named the document a "program" instead of a "plan," signifying an effort to move past the era of strict central planning.

The program contains several qualitative and quantitative goals for boosting energy and resource efficiency.

- It sets a goal of reducing energy consumption per unit of gross domestic product 20 percent by 2010. To that end, it calls for "breakthroughs" in developing and using "highly efficient and clean" power generating technology.
- It calls for efforts to make coal-fired power generation--which accounts for 70 percent of the country's energy mix--cleaner and more efficient and to accelerate efforts to control related sulfur dioxide emissions. It also calls for coal bed methane to be "developed and utilized."
- It urges enhanced efforts to develop renewable energy sources including wind power, solar energy, and biomass and says hydropower and nuclear power should continue to be developed "actively."
- The program also calls for measures to encourage the production of energy- and water-efficient products including "energy-efficient" and "environmentally friendly" automobiles and energy-efficient buildings. It states that pricing, fiscal, and taxation policies should be used to encourage resource conservation.

On October 22nd, the official China Daily quoted officials at the National Development and Reform Commission (NDRC), China's top economic planning body, as saying that energy efficiency and renewable energy targets contained in the program will open up substantial investment and business opportunities.

The newspaper quoted Liang Zhipeng, an analyst at NDRC's energy research institute, as saying that China aims for renewable energy sources to account for 12 percent of its energy mix by 2020.

The draft program also outlines a number of measures to control pollution.

- The document states that products and production techniques that are highly polluting or inefficient may be subject to "mandatory elimination."
- It also calls for improvements in pollution monitoring and control systems; for better enforcement of pollution laws; and for the implementation of systems for issuing pollution permits.
- The program also states that pollution control should be "marketized" to make use of "economic means," suggesting a potential shift toward emissions trading, which China has already piloted for some pollutants in some areas.

54. EU Bullish That China's Air Pollution 'Will Be Tackled' By 2008

The European Union's environment chief expressed confidence that government measures would effectively tackle Beijing's chronic air pollution in time for the Olympics in 2008.

Smog shrouds Beijing November 4, 2005 as the city reported serious air pollution for three consecutive days.

"I'm sure the atmosphere will be cleaner and the environment will become better in Beijing and even the whole country as the Chinese Government is working out measures to protect the environment, including by developing renewable energy," said EU Environment Commissioner Stavros Dimas in Beijing.

Dimas was speaking at a news conference ahead of a two-day international renewable energy conference, jointly organized by the Chinese government and the EU.

"The emerging economy wants to play a leading role in creating the conditions for renewables to thrive," Dimas said.

As a follow-up to the World Sustainable Development Summit in Johannesburg in 2002 and the International Conference on Renewable Energy in June last year, the conference will serve as a forum for representatives of 80 countries and the EU, including numerous ministers.

Participants will also discuss options for increasing renewables' share of the worldwide energy market.

"Developing renewable energy is of greater importance given the price of crude oil on the international market has doubled since last year," Dimas said.

The increased use of renewables helps reduce greenhouse gas emissions and air pollution, which have an impact on both the environment and economic development, he added, before emphasizing that energy efficiency was equally important.

"I would like to stress that the Chinese Government has been aware of the significance of climate change and has collaborated with the EU and others to solve the issue that the globe is facing," Dimas said.

"China has been endeavoring to develop wind power generation," he said, "more and more other renewable energy will be frequently used in the future."

55. New Rules To Deal With Auto-Related Pollution in China

China will issue new rules and regulations to deal with worsening automobile pollution in the 11th Five-Year (2006-2010) Program period, an official has said.

According to Li Xinmin, deputy director of the Pollution Control Department of the State Bureau of Environment Protection, the country will implement a new auto emission standard and encourage the use of clean energy. Supervision on automobile pollution will be strengthened and fuel quality will be improved, Li said.

Meanwhile, the bureau will support the production and use of energy-saving cars with low gas emissions in order to ensure the sustained development of the industry.

Keeping a balance between pollution and the development of the auto industry will be a key issue in the next five years, Li noted.

He warned that China is now facing a serious pollution problem due to the fast growth of the auto industry. He revealed that gas emission has become one of the main sources of urban pollution in China. It is estimated that by 2010, nearly 400 Chinese cities will face the problem of extreme car emission and coal pollution.

In the coming five years, China is expected to make great progress in developing environment-friendly cars and gradually complete the technological upgrading of the industry, said Chen Jiachang, an official from the New and High Technology Development and Industrialization Department of the Ministry of Science and Technology.

At present, China has about 5,800 auto-related enterprises which employ directly 2.2 million people, according to Chen Bin, deputy director of the Industrial Department of the State Development and Reform Commission.

The output value of the auto industry came to 1.1 trillion Yuan (123 billion US dollars) last year, accounting for nearly 2 percent of China's GDP, compared with 1 percent of GDP at the end of the country's Ninth Five-year Plan period (1996-2000). The figure is estimated to rise to 2.5 percent at the end of 2010. The increase of auto industry production as a proportion of GDP means that it has become a pillar industry of the country.

Chen predicted that China's domestic demand for cars will keep rising with the fast growth of the economy in the next five years, saying that the market demand will hit 8 to 9 million units by 2010, with the auto output standing at 10 million units.

56. Buyers Of Small Cars in China To Enjoy Big Tax Breaks

Buyers of small-engine, low-emission cars are set to get tax breaks as the government tries to reduce oil consumption and pollution. The incentives, to be announced soon, will define what environment-friendly and economy cars are, Liu Zhi, director of the industry policy department of the National Development and Reform Commission, said at a seminar on cleaner fuel.

For example, cars with an engine capacity up to 1.4 liters are now categorized as "economy automobiles." Other criteria include size, oil consumption, environment standards and safety indicators.

The State Council Development Research Centre, the government's top think-tank, has prepared a report on the tax breaks, Feng Fei, the center’s director of the industry department, told China Daily recently. Buyers of low- or zero-emission vehicles will be exempted from taxes while bigger cars with higher emissions will be taxed heavily, he said.

For cars with an engine capacity of more than 3.0 liters, the tax could be as high as 15-20 per cent, Feng said. At the moment, vehicle tax is 3-8 per cent and is levied on auto producers before vehicles enter the market.

"We suggest that tax be levied on car buyers directly, which will encourage them to consider buying economy vehicles with lower emissions," he said.

Liu said the tax incentives are aimed at lowering oil consumption and easing environmental pressures. Automobiles account for nearly one-third of China's oil consumption annually, according to official statistics.

The centre predicts that by 2010, cars will consume 138 million tons of oil each year, or 43 per cent of China's total demand.

The State Administration of Environment Protection has forecast that urban pollution will mainly be generated by cars unless the country is able to effectively control exhaust emissions.

However, economy cars in China have had a rough ride. About 84 city governments nationwide forbid small-engine cars from entering downtown areas during rush hours. In Beijing, for example, automobiles with engine capacity lower than 1 liter are not allowed on Chang'an Avenue the main east-west road across the capital or on the fast lane on some expressways.

Such restrictions are unreasonable, especially at a time when oil prices keep rising, Liu said. A few months ago, Premier Wen Jiabao urged "all regulations that suppress the development of economy cars be dropped" as part of efforts to build an "energy-saving society."

57. Buyers Of Big Cars in China To Pay More Tax

Buyers of big cars will fork out more taxes and those who opt for smaller models will pay less under a revised auto consumption tax likely to come into force in China next year China Daily quoted Zhang Jinhua, deputy director of the China Automotive Technology and Research Centre, as saying at the Fourth International Clean Vehicle Technology Conference and Exhibition.

The current tax structure, which has three categories for different engine sizes, is likely to increase to five. Vehicles with 4 liter or higher engines would pay between 20-25 percent instead of the current 8 percent, while those with engine displacement of 1 liter or less will pay 1 percent instead of the current 3 percent.

Industry experts see it as a government move to increase fuel efficiency and reduce emissions.

"The consumption tax reform cannot have an immediate impact on the clean-vehicle market. But at least, it is an inspiration for car makers," the newspaper quoted Zhang as saying.

Zhang also pointed out that substantial support from the government is needed if emissions are to be cut significantly, because the price for hybrid vehicles will remain high without government support.

Prius, jointly manufactured by Toyota and the China FAW Group Corporation, will be the first hybrid car available in the Chinese market. Zhu Yanfeng, president of the joint venture, has announced that Prius would be available from mid-December for 250,000 Yuan (31,000 US dollars) a price tag substantially higher than the average.

58. Fuel Additives Lab Launched In Beijing

BASF and the Chinese Research Academy of Environmental Sciences have inaugurated the country's first official vehicle fuels and fuel additives laboratory in Beijing yesterday. The test center, which is also the first independent engine test lab in China, has been built with technical and financial assistance by Germany-based BASF.

The laboratory, located on the research academy's site in northern Beijing, will operate according to internationally recognized procedures in assessing the quality of gasoline, according to official sources.

The lab will provide recommendations supported by data from the testing to China's environmental decision makers like the State Environmental Protection Administration, which will be used to set and supervise regulatory standards for fuel quality.

SEPA, which is the government body that administers CRAES, is responsible for regulating the quality of fuels for motor vehicles and reducing emissions. The ultimate goal of the new lab is to support China in reducing vehicle emissions and bring about a cleaner environment in the country.

59. Clean Diesel Retrofit Demonstration Project Underway In Beijing

Last year, the US EPA and SEPA signed a Memorandum of Understanding to collaborate on an integrated set of clean fuels and vehicles projects. EPA committed to providing technical expertise and more than $200,000 toward diesel retrofit demonstrations. On November 10th, work began on retrofitting 25 buses in Beijing with clean diesel technology, under a collaboration between EPA, China's State Environmental Protection Agency (SEPA) and industry partners.

The Southwest Research Institute will manage the Beijing bus retrofits, coordinating closely with EPA, the Chinese government, the bus company, and emissions control vendors. The institute, a Texas-based nonprofit specializing in technology transfer, is contributing matching funds to the project.

The retrofit project will demonstrate reductions in emissions of particulates and other pollutants, through the introduction of cleaner emissions control technologies and cleaner fuel. The intended test matrix is summarized below.

	Euro 1 Bus			Euro 2 Bus		
Fuel Sulfur	DOC	FTF	WFDPF	DOC	FTF	WFDPFF
350 ppm	3	3	0	5	5	
50 ppm						9

Officials from EPA, SEPA, and the Beijing Environmental Protection Bureau held a ceremony in Beijing to mark the start of demonstration project.

As a member of the UN Partnership for Clean Fuels and Vehicles, the United States has established similar collaborations in countries such as Chile, India, Thailand and Mexico.

Other projects planned between EPA and SEPA include a work-study program for Chinese officials at EPA's National Vehicle and Fuel Emissions Laboratory in Ann Arbor, Michigan, and compliance management demonstrations, including recall, on-board diagnostics, in-use testing, and certification.

60. Beijing Adopts Tighter Vehicle Standards

The State Council of China has approved the implementation of State Phase III, IV (similar to Euro III and IV) vehicle emission standards in Beijing from December 30, 2005. Details are:

- From Dec. 30, 2005 on, Beijing applies Phase III requirements of *Limits and Measurement methods for emissions from light-duty vehicles (III, IV)* (GB 18352.3-2005) for light-duty gasoline and gaseous fuels vehicles, applies Phase III requirements of *Limits and Measurement methods for exhaust pollutants from compression ignition and gas fueled positive ignition engines of vehicles (III, IV, V) (GB* 17691-2005) for heavy-duty diesel engines and heavy-duty gas fueled engines. From Jan. 1, 2007, Beijing will apply Phase IV emission requirements for light-duty diesel vehicles. The State Council requires Beijing to prepare qualified diesel fuel in advance, and before this date, Beijing could take appropriate measures not to promote light-duty diesel vehicles.
- From Dec. 30, 2005 on, newly type-approved vehicles to be marketed in Beijing have to install OBD system. Vehicles types that obtained type approval of Phase III emission standards and have been marketed before the date could postpone the installation. After Dec. 1, 2006, marketing of vehicles without OBD system is prohibited. After Dec. 30, 2005, vehicles don't meet the newly implemented emission standards will no longer get registered.
- As encouragement measures, vehicles that are installed with OBD system will be tested for emissions once per 2 years within the first 6 years of registration, and once per year after 6 years of registration; a 30% off of consumption tax is given to these vehicles as well.

It is worth noting that as of December 21, 2005, the number of days in which air quality was equal or better than the National Air Quality Standards Level 2 reached 230, the target set for the year so the goal was achieved slightly ahead of schedule. Thus the air quality in Beijing has improved continuously since 1999. However, because of continued growth in the vehicle population, Beijing thinks it will be very difficult to achieve further improvement in 2006.

61. SEPA Official Quits Over Harbin River Spill

China's chief environment official has resigned in the wake of scathing public criticism of the handling of a toxic spill into the river supplying water to millions of farmers and city dwellers in north-east China. The resignation of Xie Zhenhua, the director-general of the State Environment Protection Administration, was announced on Friday night in a statement on the official Xinhua news agency.

Mr. Xie was forced out to take responsibility for the spill into the Songhua river, near Harbin, and SEPA's mishandling of its aftermath, the statement said. "After this major water pollution incident occurred, SEPA failed to pay sufficient attention to the incident and underestimated its possible serious impact," it said. "(SEPA) should bear due responsibility for the losses caused by this incident."

Mr. Xie's ousting will create pressure for further resignations from the large body of city and provincial officials, and company executives, involved in an elaborate initial cover-up of the pollution.

"It's reasonable that Mr. Xie resigned," said Gao Zhong, of Clean Water Alliance, a non-governmental organization. Mr. Gao said that water pollution was a "perfect example" of the need for strong central management of environmental regulations, as many problems were snared in conflicts between local governments.

Central and local government officials delayed telling the public about the river contamination for about a week after the spill on November 13, caused by an explosion at a chemicals plant operated by PetroChina, the country's largest oil and gas company, in Jilin province.

PetroChina did not take responsibility for the pollution until after Harbin's water had been turned off for five days to prevent local residents drinking it. Even when Harbin leaders announced that the water would be cut off, they first said it was to allow for maintenance, before admitting hours later the real reason was the pollution of the river.

Zhang Zuoji, the governor of Heilongjiang province, said later the lie had been "well-intentioned", to take into account the "feelings" of neighboring Jilin and protect relations with Russia. The Songhua flows through Jilin and Heilongjiang provinces and then into Russia.

"With the support of the central authorities, we corrected this 'lie with good intentions' within 10 hours," Mr. Zhang said in an interview with the official media.

SEPA itself has attempted to minimize its own responsibility in recent days, saying it was not told of the river's contamination until five days after the explosion.

Mr. Xie's resignation parallels that of the Health Minister and the Beijing Mayor in 2003 to take responsibility for the mishandling of the severe acute respiratory syndrome (SARS) virus.

Harbin's water was turned back on earlier this week, but the problem is far from contained, as the contaminated slick in the river is now making its way towards the Russian far east.

Mr. Xie will be replaced by Zhou Shengxian, a former director of the State Forestry Administration.

62. Bus Upgrade Coming For Olympics In Beijing

Beijing is going to replace 7,277 obsolete buses with new ones that meet higher environmental standards between now and 2008 in a bid to reach the goal of a "green Olympic Games," according to a news release by the Bank of Beijing. According to a contract signed on Tuesday between Bank of Beijing and the Beijing Municipal Committee of Communications, the bank will provide a loan of 4 billion Yuan (US$ 493 million) to the Beijing Public Transport Group to help replace buses with excessive emissions.

Yan Bingzhu, board chairman of Bank of Beijing, said the vehicles to be eliminated include three types: diesel-engine buses of Europe I or lower emission standards, worn-out buses and those that can use either petrol or liquid petroleum gas.

Zheng Shusen, board chairman of the Beijing Public Transport Group, said 17,507 buses are now on the road. Zheng said that by the end of this year, the group will have replaced 3,858 diesel-engine buses of Europe I or lower emission standards as the first step of the project.

The whole replacement project will be completed by the 2008 Olympic Games.

Zheng said new buses are more comfortable and convenient and take on a more modern look, which will contribute to Beijing's image as an international metropolis. All the buses will be equipped with electronic screens and speakers to announce the coming stops. The floors will be lowered, as a convenience to passengers, especially children and the handicapped getting on or off.

Liu Xiaoming, vice-director of the Beijing Municipal Committee of Communications, said all the new buses will meet the Europe III emission standard. Liu expected half of the city's buses will meet the standard by the end of this year.

Beijing Vice-Mayor Ji Lin said the co-operation among the bank, the government and the enterprises set a good example for the infrastructure construction of the capital. Ji said the government would continue to encourage the development of public transport and make it a priority in solving the city's traffic problems.

He said as weather conditions in Beijing are unfavorable for pollutants to disperse for three months every year, the municipal government was considering taking tougher measures to improve air quality.

Ji pointed out that environmentally friendly vehicles represented the developing trend of Beijing's public transport. He said Beijing would have 5,000 natural gas-powered buses running in 2008.

Despite the rapid growth of the fast-track transport and private cars, buses are still the most popular mode of transport for the Beijing residents. In 2004, 4.36 billion person-rides were reported.

63. China Launches Hybrid Bus

The Chinese government has revealed that manufacturer First Auto Works (FAW) has unveiled its first hybrid-powered City Bus. Fuel cell developer Enova Systems has announced that the first bus was developed by its client, FAW, at its Chinese development plant on December 10th this year.

The move will come as a major boost to the country as it looks to tackle vehicle emissions, as the creation of the bus should eventually result in public transport relying on clean energy such as hybrids and fuel cells. FAW has claimed that the Hybrid City

Bus increases fuel economy over traditional buses by as much as 38 per cent, while emissions from the vehicle are reduced by up to 30 per cent.

Commenting on the future of the relationship between Enova and FAW, Enova's chief executive, Edwin Riddell, said: "We value their support and look forward to progressing with this partnership."

FAW has seen its annual production grow to over 900,000 units in recent years and it believes its diversification into hybrid technology ensures it is well-positioned to take advantage of the Chinese government's commitment to lower emissions.

64. China Sets Targets For Environmental Protection

The State Council has set targets for environmental protection over the next five years and fifteen years. The State Council discussed and adopted in principle the resolution on stepping up environmental protection and implementing the scientific conception of development at an executive meeting, presided over by Premier Wen Jiabao.

The meeting proposed environmental protection objectives for the next five years and fifteen years, saying that up to 2010, the environmental quality of those heavily-polluted cities and regions should be improved and the ecological deteriorating tendency should be curbed; and up to 2020, China's environmental quality and ecological status should be improved remarkably.

The meeting held that the Communist Party of China (CPC) Central Committee and the State Council always paid great attention to environmental protection and did a great deal in this regard, so that the environmental quality is stable nationwide and the environmental quality of some cities has improved. Nevertheless, the meeting said, it has to be admitted that the environmental protection situation is still stark in China. The discharge of major pollutants exceeds the bearing capacity of environment. With the economic growth in future, the resources and energy consumption will go on rising and a pressure on environmental protection work will be intensified.

Official statistics indicate that over one-third of China's land territory has been ravaged by acid rains and most of its major rivers are polluted. More than 300 million rural residents lack access to clean water. Water pollution accidents occurred frequently. The State Environmental Protection Administration on Wednesday confirmed that the Songhua River in northeast China suffered a major water pollution incident owing to the explosion of a petrochemical plant at the upper reaches.

The meeting acknowledged that it is one of the crucial measures to beef up environmental protection for implementing scientific conception on development, for building up environmentally-friend society and accomplishing the harmonious coexistence of humans and the nature.

The meeting proposed seven measures for fulfilling the five-year and fifteen-year environmental protection goals.

- First, the meeting required a coordinated growth among economy, society and

environment, holding that different areas should work out their own development plans based on their environmental bearing capacity, ecological status and population.

- Second, tough environmental issues, such as water and air pollutions, and nuclear radiation, have to be resolved.
- Third, legislation on environmental protection has to be enhanced. The legislation on recycling economy and ecological protection should be sped up. The legal aid system for pollution victims should be established and the penalty for environmental laws violation be intensified.
- Fourth, the pollutant discharge total volume should be supervised and contained and the permit card system for pollutant discharge should be improved. Any pollutant discharge without permit is punishable.
- Fifth, an environmental protection investment system should be established, so the government, enterprises and whole society can all participate in environmental protection investment.
- Sixth, environmental protection work will be put into the appraisal system for local officials, who will be ascertained responsibilities if they fail to effectively protect environment.
- Seventh, public opinions will be heard when going in for environmental protection legislation and environmental protection planning.

65. Beijing Gets New Fuel Cell Cars For Olympic Fleet

Beijing Public Transportation Corp. has received three brand new fuel cell passenger cars from Daimler-Chrysler. The three new cars, prototypes of the green vehicle fleet serving the Beijing Olympics, will be used in Beijing's hi-tech zone, or Zhongguancun Area, for public transportation in an 8.19-km route.

The experimental commercial use of the fuel cell cars is the first of its kind in any developing country.

The Beijing Public Transportation Corporation has prepared all facilities for hydrogen refilling, which is vital for fuel cell cars, data collection systems, training for drivers and service management.

The Global Environment Fund and the United Nations Development Program supported the experimental project for promoting free-emission fuel cell cars in China, which will host the 2008 summer Olympics and the 2010 World Expo in Shanghai.

The three cars were shown at the Fourth International Clean Vehicle Technology Conference and Exhibition.

At the inaugural for the exhibition, Ma Songde, vice-minister of Science and Technology, said that the development of energy-saving vehicles is one task for build an energy-saving society and an environment-friendly economy.

As the world's most populous country and a developing one, Ma said, China should cultivate an auto industry oriented for saving energy and protecting the environment.

Fuel cells transfer hydrogen to electric power, which produces no pollution. Many big auto companies in the world invest much into the research and development of such environment-friendly vehicles.

An industrial policy guideline issued by the government in 2004 supported the development of vehicles using clean energies.

Ma said Chinese companies need to combine their own innovative capacity with the latest technologies licensed by multinational auto makers to shape the cutting-edge in the industry.

At present, Chinese auto makers have already developed more than 100 kinds of hybrid cars and fuel cell cars, many of which were shown at the Beijing exhibition.

66. Saudi to Consider $3.5 Billion South Korean Refinery

Saudi Arabia, the biggest shareholder in South Korea's S-Oil Corp., will consider building a refining unit for as much as $3.5 billion amid a surge in Middle East investment interest in Asia as energy demand rises. Saudi Crown Prince Sultan bin Abdulaziz said he will order ``active'' consideration of the plan for S-Oil to make the investment, South Korea's Ministry of Commerce, Industry and Energy said in a statement, citing comments by the prince to South Korean Prime Minister Lee Hae Chan in Riyadh on November 28th.

Gulf Arab oil producers, which export more than half their crude oil to Asian nations, are seeking to use part of their record oil revenue to boost stakes in Asian refineries. The producers are offering guaranteed oil supplies in return.

State- owned Saudi Aramco holds 35 percent of S-Oil, South Korea's third-biggest refiner.

The proposed plant will process fuel oil into higher-priced oil products including diesel.

Oil refineries around the world are struggling to keep pace with surging demand for diesel, gasoline and jet fuel. Crude oil in August reached a record $70.85 a barrel after Hurricane Katrina flooded plants along the U.S. Gulf of Mexico coast and disrupted output.

A lack of refining investment is keeping prices high, oil company and OPEC officials said. At least 10 new plants are being planned by members of the Organization of Petroleum Exporting Countries, increasing global refining capacity by 2.4 million barrels a day, or 2.8 percent, by 2011. World crude oil prices have risen 90 percent in the past two years, even as the producer group bolstered output by 12 percent.

S-Oil's plan to increase fuel production and tap rising demand in China may boost spending by South Korean refiners to as much as $9.5 billion over the next three years. China is the world's fastest-growing fuel market. Profit from processing each barrel of oil into gasoline and other fuels rose to a record in Asia this year.

Kuwait, the Middle East's fourth-largest oil producer, may raise its holding in South Korea's SK Corp. as part of an agreement to supply more crude oil to the Asian nation and invest in infrastructure. Kuwait bought about 4 percent of SK Corp., South Korea's largest refiner, in 2004 before signing an agreement in December to supply oil for 10 years. Kuwait and state-run Korea National Oil Corp. agreed on Nov. 26 for the storage for the first time of Kuwait crude oil in South Korea.

Abu Dhabi, which owns 50 percent of South Korea's fourth- biggest refiner, Hyundai Oilbank Co., will decide before the end of the year on a $1 billion upgrade and expansion plan to boost sales of gasoline and other fuels in Asia, Mohammed Al Khaily, managing director of Abu Dhabi's International Petroleum Investment Co., said in an Oct. 19 interview.

International Petroleum Investment in May signed an initial agreement with Taiwan's Chinese Petroleum Corp. to buy as much as 20 percent of the refiner for $5 billion.

Adding plants in South Korea, which has the world's fifth- largest refining capacity, and other parts of Asia will increase demand for high-sulfur crude oil produced by Saudi Arabia. South Korea sold $10.2 billion of oil products overseas last year, the sixth-largest exports for the country.

A cracker increases the yield of diesel, jet fuel and gasoline that a refiner gets from each barrel of crude oil. S-Oil has a capacity to process 580,000 barrels of oil a day.

Aramco is spending almost $20 billion in coming years on refinery projects to make products such as low-sulfur diesel that meet environmental rules in oil-importing countries, al-Buainain, said on Sept. 18 in Dubai, United Arab Emirates.

Motiva Enterprises LLC, the joint venture between Shell and Saudi Refining Inc. can process 275,000 barrels of oil a day. That capacity would rise to 595,000 barrels a day after the expansion, making it the largest plant in the U.S.

S-Oil has capacity of 525,000 barrels a day of and is owned 35 percent by Aramco. The Philippine refiner Petron, with capacity of 180,000 barrels a day, is 40 percent held by the Saudi Arabian state oil company.

67. ASEAN Leaders Broaden Efforts On Pollution Control, Energy Conservation

At their 11th annual summit on December 12th, leaders of the member states of the Association of Southeast Asian Nations (ASEAN) expressed "serious concern" over a recurring polluted haze in the region and pledged to step up efforts to protect the region's forests and minimize the impacts of rapid development. Leaders said in a statement they "recognized the need to further intensify and undertake coordinated action, particularly to address the underlying causes of land and forest fires." They called for "swift and more effective interagency collaboration and coordination at the national and regional levels to deal comprehensively with the transboundary haze pollution."

ASEAN countries will also boost cooperation within the grouping and with dialogue partners such as China and Japan "to promote energy efficiency and to explore and

develop alternative energy sources to ensure energy security and sustainable economic growth," they said.

Energy conservation is also high on China's agenda, with Premier Wen Jiabao telling the East Asian Leaders' Dialogue that the country aims to cut energy use per unit of gross domestic product by 20 percent over the next five years. "This is an important strategy that China pursues to achieve sustainable development," he added.

Wen also cited the "increasingly adverse impact exerted on resources and the environment by economic and social development" as one of China's key challenges, and said the government was determined to make "committed and long-term efforts" to resolve this problem. The premier failed to outline specific actions, but said China was drawing up a new set of five-year guidelines for growth that would include a "new approach to industrialization" and "build a resource-effective and environment-friendly economy."

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

68. Study by IBM and U of M Explores China's Automotive Industry Future

A new study[1] by IBM and the University of Michigan Transportation Research Institute's Office for the Study of Automotive Transportation (OSAT) reveals the Chinese automotive industry is facing a number of significant challenges as it continues its expansion. The need to adapt to a market economy, a lack of technology and knowledge transfer from joint ventures, and infrastructure, air quality, and oil supply challenges all combine to create an uncertain future for the Chinese automotive industry, according to the study.

The results were part of extensive research which gathered the opinions of leaders from the Chinese automotive and government industries, complemented by views from academic experts. The study was designed to deliver a unique insider's view from Chinese experts on the potential challenges their industry will face.

The Chinese automotive industry has grown dramatically over the past decade. According to the National Bureau of Statistics of China, in 1993 a mere 220,000 cars were produced in China. By 2004 that number jumped to 2.34 million units produced. Fueling this production growth has been a rise in regional demand throughout Asia. Within China the number of new car registrations is expected to grow steadily rather than exponentially over the next 10 years.

The Inside China study participants revealed that an improvement in sales and service infrastructure is needed to facilitate the anticipated growth. One of the major issues is uncertainty around vehicle financing policies. The Chinese government restricted the number of auto loans in 2003 due to a huge series of defaults. There has been some movement with new policies allowing a number of manufacturers to create their own financing units.

[1] "Inside China: The Chinese View Their Automotive Future"

One unexpected area of growth that touches the sales infrastructure is the burgeoning used car market in China. The current resale model in China requires a dealership to facilitate the transaction. Yet, there are still considerable requirements to completing used vehicle sales. Several of the study's experts agreed that a well-regulated used car marketplace could lead to a growth opportunity for manufacturers.

Another area of focus in China is building a quality car dealership network that not only sells cars but becomes a reliable source of service for car owners. Currently, customer satisfaction at dealership locations varies significantly. The interviewees agreed that since China is such a new marketplace all players have an opportunity to leverage the dealership experience to create lasting relationships with customers.

With this dramatic growth taking place, the Inside China study found government strategies attempting to manage the transition to a market economy. For example, a Chinese company wanting to produce vehicles in China may not form a partnership with a foreign company if the foreign company will own more than 50 percent in this venture. In part, these restrictions were put in place to also facilitate the growth of Chinese research, development and manufacturing knowledge for future domestic automotive companies.

According to the Inside China study, joint ventures, in different degrees, have not transferred the technology and knowledge to their Chinese partners that the government expected. Joint venture partners are concerned their Chinese partners will use any knowledge they transfer to compete with them in the future so they are being cautious. Thus, the skills and experience in manufacturing, design, testing and distribution haven't developed as fast as Chinese officials expected. Most of the interviewees expect it will now take two decades for Chinese manufacturers and suppliers to close the product and process gaps with their world-class counterparts."

The Chinese recognize the need to expedite their product and process knowledge attainment and are moving to fill the gap through a number of strategies. The study predicts an increase in merger and acquisition activity, inside and outside of China, over the next 10 years aimed at acquiring technology and streamlining processes. A change in relationship terms is also expected with the idea of joint ventures being replaced with cooperative development deals where both partners invest in development of new brands and cars.

Foreign engineering services firms should also expect a boom in business, according to the study. With some Chinese manufacturers racing to develop new engineering and design processes, many are outsourcing the work to engineering firms that offer expertise in key areas and have no competing products. One other area the Chinese are exploring is the increased use of components and technology available from global, tier-one suppliers.

The Inside China study also identified the country's infrastructure, air quality, and oil supply as possible inhibitors to growth of the domestic automotive market. According to the National Bureau of Statistics of China, in 2004 China's civil vehicle population reached 26.9 million increasing fourfold from 1990's 5.5 million.

With such large vehicle growth in major cities, traffic congestion has become a fact of life. Some efforts to build elevated roadways and public transportation systems have begun

in Beijing and Shanghai to reduce congestion, but there is still a parking shortage. According to China Today, currently Beijing has 2.4 million registered vehicles but can only provide parking spaces for 600,000 of them. Interviewees believe the parking shortage could also be a barrier to future auto development. They see a need for the government to focus on traffic management that integrates traffic planning, road construction, traffic-flow control, and congestion management.

In terms of air quality, the Chinese see the rise in the number of vehicles becoming the major contributor to poor air quality in their major cities. Though the government is trying to accelerate vehicle emission standards, interviewees report barriers such as high sulfur content in oil, low-quality fuel, changing standards, poor enforcement, and increased vehicle costs due to higher emission standards may keep China from reaching their desired air quality goals.

The study participants also consider manufacturers as the leaders in conducting the research and development on advanced clean technologies such as hybrids, fuel cells, and other alternative fuels. These clean technologies will also play an important role in the future Chinese automotive industry because of future oil supply challenges China (and the rest of the world) faces in the future.

Forty percent of China's oil was imported in 2004, making it the third largest importer of oil. In the future, vehicles are expected to account for 57 percent of China's total petroleum consumption, and China's total import dependency is projected to grow to 75 percent by 2030.

LATIN AMERICA

69. Bogotá Mayor Unveils Measures to Lower Emissions

On December 6th, the mayor of Bogotá announced new measures to mitigate air pollution in the Colombian capital. The statement from Mayor Luis Eduardo Garzón was in response to a report by the city's Environmental Department (DAMA) which found that in some districts levels of suspended particulate matter exceed standards. DAMA attributed 78 percent of the contamination to vehicles and 12 percent to industrial sources.

Garzón did not adopt DAMA's recommendation for stricter controls on rush-hour traffic, but said steps would be taken to scrap older buses and strengthen vehicle emissions inspections. He added that "corrective measures will have to be adopted" to ensure stricter enforcement of controls on industrial emissions.

A spokesman for the mayor's office said that the administration is also supporting other recommendations from DAMA for increasing the 14 stations that currently monitor air pollution, stepping up spot checks on vehicles, providing subsidies for those who use environmentally friendly fuels, and undertaking publicity campaigns to alert the public to the problem.

Nevertheless, Garzón has so far refused to accede to requests by DAMA and the environmental agency for the region around Bogotá, the CAR, to declare a state of

environmental emergency for districts with the highest levels of contamination. Instead, Garzón said that he will announce further measures to control air pollution when the city holds its annual "No Car Day" in February, 2006.

70. Argentinean Lab to Test Autos for EU, U.S. Standards

On November 8th, Argentina's president presided at the opining of a newly upgraded automobile emissions lab that will test new-model cars to see if they meet U.S. and EU standards. The upgrade cost US$ 5.4 million. The original testing facilities were opened in September 2004. The improvements will allow it to upgrade certification to match the U.S. Federal Test Procedure (FTP75) and EU Euro II standards. President Nestor Kirchner said the lab will help protect the environment and also lower new vehicles' costs, since in the past locally made and imported cars had to be tested and certified outside the country. There are an estimated 7 million cars in Argentina, with 400,000 added each year. A number of international makes are manufactured in the country both for domestic use and for export.

AFRICA

71. Lead Free Gasoline Sweeping Across Africa

The Partnership for Clean Fuels and Vehicles has been working diligently to eliminate the use of lead in gasoline across Africa by the end of 2005, as called for in the Dakar Declaration. Recent successes are highlighted below. It now appears likely that most of Africa will in fact be lead free by the end of this year or early next year. One result will be an effort to launch the next elements of the campaign – to get catalytic converters on new cars and to reduce sulfur levels in both gasoline and diesel – a process that is already underway in some African countries such as South Africa.

A. South Africa Going Lead Free

Unleaded petrol was first introduced in South Africa in 1996. Since then the use of unleaded petrol has gradually increased and now accounts for approximately 40% of total petrol sales. From January 1 2006, lead will no longer be added to petrol in the production process and leaded petrol will no longer be marketed by the oil companies. The government has determined that three octane grades of unleaded petrol (ULP) will be permitted, namely 91, 93 and 95.

Two octane grades of lead replacement petrol (LRP) will be permissible, a 95 octane grade at the coast and 93 octane grade inland.

The regulated pump prices will be determined as at present. This means that price setting for the unleaded grades already available will continue as before. The prices of the lead replacement grades will be the same as the prices of unleaded petrol of the same octane.

In the inland area a special “demand management levy” will be introduced, which will increase the pump price differential between it and 93 octane petrol, initially by 10c per liter.

Since motorists will now have a choice of grades it is desirable that only those who really need 95 octane will choose to use it. The inland demand management levy is there to incentivise motorists to consider their choices carefully.

A database has been compiled which indicates the requirements of virtually all current models. This is being made widely available. Hard copies of the database will also be available at service stations. For each model, the data will indicate, separately for coastal and for inland operation, which grade is recommended (for optimal operation) and with which other grades the vehicle is compatible. Motorists should remember that driving habits may have an influence on which octane grade they find best suited to their particular needs.

As from February 2005, all new petrol-powered passenger and light commercial vehicle models introduced in SA need to meet mandatory maximum emission levels and hence should have been fitted with a catalytic converter. As from January 2008, all new petrol-powered vehicles of all types, whether they are new or existing models, must be fitted with catalytic converters.

Two grades of diesel will be available, as is currently the case.

Motor manufacturers have indicated that the lowering of sulphur content will allow many vehicles to extend their oil drain intervals, which will reduce maintenance costs.

The reason for reducing sulphur in diesel from 3 000 ppm to 500 ppm is to reduce harmful vehicle emissions and thus improve urban air quality. Reducing the sulphur content will also enable the introduction more technologically advanced engines leading to a further reduction in harmful emissions.

Certain hydrocarbon compounds present in diesel fuel have a natural lubricating effect. When they are removed during the fuel desulphurization process the lubricity of the fuel is reduced. Therefore lubricity additives will be used in the 500 and 50 ppm sulphur diesel grades to ensure that the specified lubricity levels are maintained.

B. Namibia Petroleum Industry Gearing Up to Phase Out Leaded Fuel

Namibia is on track to phase out leaded petrol from 1 January next year, a senior official in the Ministry of Mines and Energy has announced. "We are geared", said the deputy director of gas and fuel with the ministry, Immanuel Nghishoongele. He explained that the pumps currently being used at service stations for leaded fuel will be used for the new fuel 93 RON.

"So far it has been good", he said about the publicity campaign being conducted by the government on the phasing out of the fuel. The government and the oil industry have formed a joint task force to oversee the phasing out of leaded petrol. Government said the phasing out of leaded fuel will help in the control of vehicle emissions. The elimination of emissions of lead and other heavy metals from motor vehicles and the

reduction of sulphur emissions and known aromatic carcinogens to lower levels are part of the Dakar Declaration and SADC agreements that are supposed to be implemented by January 2006.

From the beginning of 2006, leaded petrol will be phased out in Namibia and a new grade (Lead Replacement Petrol) will be introduced. The decision to phase out leaded petrol has already been approved by the cabinet as part of a process that will see newly formulated fuels being introduced, which will contribute to the improvement of urban air quality and the environment generally. According to the government, these cleaner fuels will also enable more sophisticated vehicle engine technology that is designed to reduce harmful vehicle emissions and promote improved fuel efficiency.

A lead replacement petrol (93 RON) will be introduced into the market to cater for certain older vehicles that might be susceptible to valve seat recession when driven at high speed and under heavy load conditions. The Ministry of Mines and Energy has published a booklet to guide motorists on which octane grade is recommended for their particular vehicle and whether the use of lead replacement petrol is recommended.

According to the ministry, a lubricity specification will come into effect for all diesel marketed with a reduction in sulphur to ensure and improve vehicle fuel system life.

Reduced sulphur levels in diesel and provision of a low sulphur niche grade will facilitate the trend to clean, fuel-efficient diesel technology, both in the passenger car and particularly in the light commercial sector.

The ministry said appropriate European quality fuels are required if Namibian motorists are to benefit from the latest vehicle and engine technology improvements.

C. Kenya To Go Lead-Free

Energy Minister Simeon Nyachae recently said the Kenya Petroleum Refineries Ltd will shortly stop adding lead to petrol. This has taken nearly 40 years to accomplish, but it is not easy for Africa, especially Kenya, to phase out leaded petrol.

Kenya is a signatory to the Dakar 2002 pact in which sub-Saharan countries committed themselves to eliminating lead from petrol by the end of 2005, but the general population cannot easily afford the transition from leaded petrol to unleaded. Many people cannot afford to buy new vehicles that only use lead-free fuel. In developed countries, a six-year-old vehicle is said to be very old, but in Kenya, people are still driving pre-1980 vehicles.

72. Sub Saharan Africa Celebrates Leaded Petrol Phase-Out

A promise made three years ago to rid sub Saharan Africa of leaded petrol has been met. At years end the United Nations Environment Program (UNEP) announced that as of 1 January 2006 the region's vehicle fuels will be lead-free. The phase-out, promised at the World Summit on Sustainable Development (WSSD) in 2002, means a healthier world for millions of people across the region.

Lead, a notorious heavy metal, is linked with a wide range of ailments and ill health including damage to the brains of babies and young children. It has been phased out in many parts of the world already including North America and Europe. Until a few years ago almost all countries in Sub-Saharan Africa were using leaded petrol.

Klaus Toepfer, Executive Director of UNEP, said: "This is a real environmental and health achievement and I pay tribute to all those governments, companies and others such as the World Bank who kept this promise made at WSSD". "We also need to work to tackle other pollutants, promote alternative fuels such as bio-fuels and hydrogen alongside more efficient and less polluting vehicles and transportation networks and systems that are environment and people friendly. Not just in developed countries but for everyone across the globe," he added.

The Partnership or PCFV was formed at WSSD in 2002 as a so called Type II partnership with its first aim of phasing out leaded petrol in sub-Saharan Africa. It was established to take forward the Dakar Declaration of 2001 where sub-Saharan African countries agreed to phase out leaded petrol. In 2002, only one country of the forty-nine countries in sub-Saharan Africa-- Sudan—was fully unleaded. With South Africa to go unleaded on 1 January 2006, all of sub-Saharan Africa will have switched.

In early 2006 the Partnership will launch a global leaded gasoline phase-out for the rest of the developing world and economies in transition with the goal of eliminating leaded petrol world-wide by 2008. The campaign will be backed up by workshops and awareness campaigns aimed initially at the Middle East, the handful of North African countries remaining and West Asia.

Currently well over 30 countries globally are still using leaded petrol. Some of the biggest challenges are faced in the small and far flung islands of the Pacific including Micronesia. Other countries so far without plans to phase-out lead include Afghanistan, Algeria, Bhutan, Cambodia, Cuba, Iraq, Laos, Mongolia, Myanmar, North Korea, Tajikistan, Turkmenistan, and Uzbekistan.

The Partnership is now focusing its attention on the very high levels of sulphur found in fuels in developing countries and economies in transition. Unlike lead, which was once required as an additive in engine fuels as an 'anti knocking' agent, sulphur is naturally occurring in petroleum. In Europe sulphur levels in diesel vehicle fuels are typically 10 to 50 parts per million. In many developing countries this can be at levels up to a 1,000 times higher. For example most African countries are currently at 5,000 parts per million with some countries, in Africa and elsewhere, having even higher sulphur content. These include the Sudan with a sulphur content in diesel of 11,000 parts per million; Ethiopia, Kenya, Iraq, Jordan and Tunisia with sulphur content in diesel at 10,000 parts per million and Zambia with an estimated 7,000 parts per million.

Some countries in Latin America, such as Nicaragua, Panama, Venezuela, Honduras have sulphur contents currently at 5,000 parts per million.

The Partnership agreed at a meeting in Nairobi in early December to work towards a long term target of reaching similar levels as those in the developed world. Timetables to meet the target are to be set nationally and regionally.

Sulphur causes emissions of fine particles or flecks of soot which have been linked to health problems including heart attacks in the elderly and vulnerable groups. It can also damage trees and other biological systems as a result of the formation of sulphuric acid.

“It is cause for extreme concern. So I am delighted that the Partnership for Clean Fuels and Vehicles (PCFV) has now looking at this issue too so we can end the bipolar world in which developed countries have cleaner and healthier sulphur levels than developing countries,” said Mr. Toepfer.

The introduction of lead-free petrol and diesel with reduced sulphur content also allows for the introduction of emission control technologies on vehicles including catalytic converters and particle traps.

73. Clean Diesel Arrives At South African Pumps

OIL company BP is currently rolling out its new low sulphur diesel throughout South Africa, as part of a R6 billion global program to ensure that its greener fuels are available worldwide. Its Cleaner Diesel fuel, which was officially launched at a briefing in KwaZulu-Natal, is said to be not only better for the environment, but has additives which improve engine combustion and provide anti-corrosion and anti-wear protection for engines.

Richard Fienberg, BP’s vice-president for marketing operations, says the company is committed to supporting government’s cleaner fuels legislation concerning lead phase-out and low sulphur diesel. He announced that, in addition to being more environmentally friendly, an innovative five-in-one additive will be added to BP’s Cleaner Diesel 500. “This includes an ignition improver for superior combustion and efficiency; detergent for cleaner fuel pumps and injectors; anti-wear to protect premature wear of pumps and injectors; anti-corrosion agents to protect fuel lines and tanks as well as anti-foam agents which will result in faster refueling”.

Yvonne Mfolo, chief director of communications for the Department of Minerals and Energy, said at the Durban event that she was delighted to see oil companies like BP putting their weight behind government. “The effects of BP’s global cleaner fuels initiative will be felt right here on ground level and will impact positively on everyone’s health by reducing pollution levels in cities,” says Mfolo.

Other fuels in BP’s Cleaner Fuels portfolio include Cleaner Unleaded – a heavy-metal-free fuel that has received accolades from motor manufacturers, both through the National Association of Automobile Manufacturers of South Africa (NAAMSA) and from individual companies. The industry endorsed BP’s fuel after reportedly following tests that heavy-metal-free fuel is better for engines.

BP also launched Cleaner Super in 2002 – a lead replacement fuel for use in older vehicles currently using leaded fuel. This fuel has replaced the harmful lead with harmless potassium, which acts as a lubricant preventing wear of valves in older cars, giving complete valve seat protection.

“Our aim is to reduce the effect of fuels on the environment by producing cleaner energy products that are still able to meet everyday needs,” says Fienberg.

MIDDLE EAST

74. Israel Reports Air Quality Progress in 2004

The latest report on air quality in Israel for 2004, published by the Ministry of the Environment, is based on data from air pollution monitoring stations scattered throughout the country. Following is a look at the some of the data for 2004:

- 61 high air pollution days in the Tel Aviv metropolitan area compared to 77 days in 2003.
- 55 high air pollution days in Jerusalem compared to 71 in 2003.
- Annual exceedance of fine respirable particles (smaller than 2.5 micrometers) in all of monitoring stations which measure PM 2.5 in Israel.
- Annual exceedances of respirable particles smaller than 10 micrometers in Modi'in, Derech Petach Tikva in the center of Tel Aviv, Moshav Nir Galim near Ashdod and in transportation monitoring stations in Lower Haifa and Petach Tikva.
- A few half-hour exceedances of the sulfur dioxide standard (based on the World Health Organization recommendation) in the French Carmel neighborhood of Haifa, Pardes Chana and Kibbutz Magal in the Hadera area.
- A clear trend of increase in ozone concentrations in Karmiel, Nesher and Kiryat Ata.
- Isolated exceedances of the ozone standard in inland areas including Karmiel, Nesher, Kiryat Tivon, Givat Hamore near Afula, Afula, Kerem Maharal, northern Tel Aviv, Modi'in, Karmei Yosef, Beit Shemesh, Gush Etzion, Gedera, Kibbutz Yesodot and Ramat Hovav. · Annual exceedances of nitrogen dioxide (based on the World Health Organization standard) in the old central bus station of Tel Aviv-Jaffa, Holon, Givatayim, Kfar Hayarok-Ramat Hasharon interchange.
- Annual exceedances of the nitrogen dioxide standard in all of the country's transportation stations, with the exception of the Tipat Halav station in Sderot Yerushalyim in Jaffa.

According to Environment Minister Shalom Simhon, air pollution abatement is high on the Ministry of the Environment’s agenda. Activities which were taken in the past year include:

- Reduction of the sulfur content in diesel fuel from 350 ppm to 50 ppm from January 2004.
- Ban on leaded gasoline from March 2004.
- Purchase of an additional mobile emission monitoring unit for enforcement of emissions standards on the roads.
- Switch to very low-sulfur fuel in the Electric Corporation's oil-powered power plants and switch to natural gas in the Ashdod power plant.

- Increased enforcement against polluting factories through spot checks, based on stack sampling without prior notice. In 2004, 156 spot checks were undertaken and violations were discovered in 49% of the cases.
- Administrative orders for pollution abatement to hospitals, with conditions for reducing ethylene oxide emissions.

Today, the Ministry of the Environment is promoting two new projects which should make a real difference in the country's air pollution levels in the years to come: reduction targets for air pollution from all sectors and an air resources management system.

OTHER

75. Global Warming Linked to Severity of Hurricanes

Emissions of greenhouse gases from burning fossil fuels is probably contributing to the increasing intensity of hurricanes, boosting the number of category 4 and category 5 storms in the past several decades and making it probable there will be greater flooding of coastal areas, several climate researchers said on October 25th. The increasing number of intense hurricanes is probably the result of a slight but sustained increase in atmospheric temperatures as well as rising ocean temperatures, according to Judith Curry, chairwoman of the Georgia Institute of Technology's School of Earth and Atmospheric Sciences.

Curry and other scientists spoke at an American Meteorological Society seminar regarding the relationship between global warming and hurricanes.

During the past 35 years--a period that correlates with an increase in worldwide carbon dioxide production--the number of category 4 and category 5 hurricanes has doubled, from about 40 to 90, Curry said, while the number of the lowest category 1 storms has been decreasing. Worldwide, category 2 and 3 storms have remained stable over the same 35-year period, she said.

Hurricanes are rated 1 to 5 on the Saffir-Simpson scale based on their wind speed. Wind speeds in category 4 storms range from 131 miles per hour to 155 miles per hour, while winds in category 5 storms top 156 miles per hour.

Scientists who have tracked the intensity of storms during the past 35 years also have observed an increase in the average intensity of such storms equal to about half a category in those classifications, Curry said.

The increase in storm intensity is caused in part by increasing global sea surface temperatures, which have risen approximately 1 degree Fahrenheit during the past 35 years, Curry said. She and other scientists at the seminar said the increased sea surface temperatures are at least partly the result of man-made greenhouse gases created through the burning of fossil fuels.

Curry noted that some skepticism remains over the link between global warming and a recent spate of damaging hurricanes in the Gulf Coast, with hurricanes Katrina, Rita, and Wilma making landfall since late August.

"We've been told that hurricanes come in 20 to 30-year cycles [and] that the hurricane activity we've seen the last few years is just part of the natural cycle and is not related to global warming," she said. But those critics too often have focused on North Atlantic storms and the smaller subset of those hitting the United States, instead of focusing on the increasing severity of hurricanes occurring worldwide, Curry said.

The researcher also took issue with recent comments from the director of the National Hurricane Center, Max Mayfield, who told a congressional subcommittee Sept. 20 that increased hurricane activity in the North Atlantic is "due to natural fluctuations" and that such storms have not been "enhanced substantially" by global warming. Mayfield testified at a hearing of the Senate Commerce Subcommittee on Disaster Prevention and Prediction on the lifesaving role of accurate hurricane predictions.

"To understand whether or not global warming has anything to do with the increase in hurricane activity, you can't just look at the North Atlantic," which is hit by a relatively small percentage--11 percent--of hurricanes worldwide, Curry said. Only 2 percent of hurricanes that develop during the year hit the U.S. mainland, she said. The increasing severity of hurricanes is instead a global phenomenon, and has been recorded in each of the ocean basins that produced such storms around the world since 1970, the researcher said.

Kevin Trenberth, head of the climate analysis section at the National Center for Atmospheric Research, said the increased hurricane intensity detected by the researchers since 1970 has been accompanied by a relative surge in global carbon dioxide emissions. While man-made global emissions have been climbing since the late 1800s and the beginning of the industrial age, "half of the increase in carbon dioxide has occurred since about 1970," he said.

Since 1970, the average sea surface temperature has increased 0.9 degree Fahrenheit, an increase unprecedented during the past 150 years, Trenberth said. While some of that increase may be the result of fluctuations in historical patterns, a number of computer models suggest that as much as half of the temperature increase is probably due to emissions of carbon dioxide and other greenhouse gases, he said.

Kerry Emanuel, professor of atmospheric science at the Massachusetts Institute of Technology, said the increased sea surface temperature triggers a higher number of intense hurricanes, with the wind velocity largely correlated with the amount of warm air found near the ocean's surface. The increase in hurricane frequency during the past 30 years "is very well-correlated with ocean temperatures" that are also rising, essentially providing more fuel for high-intensity storms, he said.

76. Air Pollution Tied to Increased Risk of Strokes

Increases in particles polluting the air are associated with an increase in the number of strokes caused by a blood clot in the brain -- but not the type caused by an artery rupture in the brain -- new research shows. Previous reports have shown a link between air pollution and overall risk of heart attacks and other cardiovascular events, but the specific effect on stroke risk has not been well studied, said lead author Dr. Gregory A. Wellenius, from Beth Israel Deaconess Medical Center in Boston.

The researchers evaluated the link between air pollution and stroke among Medicare recipients in nine US cities. Specifically, they analyzed data on 155,503 artery-blockage (ischemic) strokes and 19,314 bleeding (hemorrhagic) strokes recorded as hospital admissions between 1986 and 1999.

As reported in the American Heart Association's journal Stroke, the team found that an increase in particulate air pollution from the lowest to the highest levels raised ischemic stroke admissions by 1.03 percent on the same day. Further analysis yielded similar results for levels of carbon monoxide, nitrogen dioxide, and sulfur dioxide.

By contrast, the investigators found no association between air pollution and hospital admission for hemorrhagic stroke.

Wellenius cited three possible mechanisms, which alone or in combination might explain how air pollution promotes stroke. "One possibility is through inflammatory effects. The other is through pulmonary reflexes that trigger changes in blood pressure or heart rate." A third possibility is changes in clotting factors that tend to promote more blood clots.

Although the increase in ischemic stroke risk is small, the number of excess strokes can be high because pollution affects the whole population.

"Taken together with previous reports, the results suggest that reducing exposure to air pollution is likely to reduce the risk of a number of health problems, including heart disease and stroke," Wellenius concluded.

77. Harvard Study Looks at Economic Impact of Warming

A report released Nov. 1 by Harvard Medical School's Center for Health and the Global Environment forecasts the economic impact of climate change through its effect on weather patters, natural ecosystems, and human health. The 142-page report, Climate Change Futures: Health, Ecological and Economic Dimensions, was co-sponsored by the United Nations Development Program and the insurance company Swiss Re. The study includes 10 case studies that look at the existing and future costs associated with climate change. These case studies focus on specific health problems that may be exacerbated by climate change; the likelihood and possible effects of extreme weather events; and the possible impact of global warming on agriculture, forests, water resources, and marine ecosystems. The study then looks at the financial implications for each of these effects. The report finds that through these financial implications, "the insurance industry will be at the center of this issue, absorbing risk and helping society and business to adapt and reduce new risks."

78. Global Use of Renewable Energy Growing Rapidly in Response to Oil Prices

A. Global Energy Meeting Agrees On Roadmap on Renewables

Environment officials from around the world agreed in Beijing to work to increase reliance on renewable sources of energy, underscoring a commitment to renewables

after oil prices hit record highs. The draft statement stopped short of setting a firm goal but it recommended the UN Commission on Sustainable Development consider the launch of a 10-year framework to "substantially increase the use of renewable energy".

The Beijing Declaration was the culmination of a two-day international conference that was a follow-up to meetings in Johannesburg in 2002 and last year in Bonn that aimed to promote cooperation on renewable energy.

While the statement also did not set a target for investment in the renewables sector, it stressed the need for funds for research and development, support for commercialization of new technologies and the transfer of technologies from rich nations to poor.

The world will need massive investment in infrastructure to meet surging energy demand, otherwise it will face soaring greenhouse gas emissions, increased dependence on the volatile Middle East for fuel and even higher prices, the International Energy Agency said in its long-term outlook.

Global investment in renewable energy hit a record $30 billion last year, accounting for 20-25 percent of all investment in the power industry, according to a Worldwatch Institute report released just before the meeting.

Although renewable forms of energy are still more expensive than coal and oil, the Beijing Declaration acknowledged that record high global oil prices were focusing attention on alternative sources of power. "We also note with concern that recent trends in the world energy market, especially the doubling of oil prices in less than two years, has increased the economic risk of relying primarily on imported energy and a volatile world energy market," it said.

China, which is the world's second-largest emitter of greenhouse gases after the United States, raised its target for renewable energy, saying it should account for 15 percent of national consumption by 2020.

Some delegates said the conference was only meaningful if there was a commitment to similar targets globally and more concrete pledges on technology transfer.

B. UK Moves to Boost Biofuel Use in Cars

Five percent of all motor fuel sold in Britain will have to come from renewable sources by 2010, UK Transport Secretary Alistair Darling has announced. The requirement will lead to a 20-fold increase in biofuels use, which currently stands at about 0.25 percent of all road fuel sales, and the announcement received a largely positive response from the farming and renewable energy sectors.

The measure, known as the Renewable Transport Fuels Obligation, should save around one million tons of carbon dioxide emissions in 2010, the equivalent of taking a million cars off the road, Darling said in a statement.

Biofuels use in the UK has been growing during the past few months, with supermarket giant Tesco Plc among those expanding sales at its forecourts.

The Renewable Power Association (RPA), however, expressed disappointment at the five percent requirement, which is a volume target and is the equivalent of 3.5 percent on energy content. The European Union biofuels directive released in 2003 calls for a target of 5.75 percent on the basis of energy content.

Oil companies that sell more than the five percent obligation will be able to sell credits to other companies.

C. France Takes New Steps To Fight Global Warming

France plans to boost the use of solar power with cash incentives and to hit motorists with higher taxes on the worst polluting cars as it beefs up the fight against global warming. Tighter rules on insulating houses to save energy will also be introduced, a step that could help to cut 10 million tons of carbon dioxide emissions, said Prime Minister Dominique de Villepin at a climate presentation. Villepin said France would also back moves to curb greenhouse gas emissions beyond 2008-2012, the first period covered by the international Kyoto Protocol on climate change.

His comments came as officials from 150 countries prepare to meet in Montreal, Canada on November 28 for a UN climate change summit to help shape the Kyoto Protocol post 2012.

France aims to boost the use of renewable energy, such as solar and wind power, to 21 percent of electricity output by 2010 from 15 percent now as part of its bid to curb emissions.

"Beyond this protocol, we wish to enter new engagements on CO2 emissions," Villepin said. The government said it planned to boost solar power producers by paying them substantially more for the electricity they produce. Tariffs for supplies to homeowners would rise 50 percent next year, with prices for supply to businesses rising 100 percent, the government said. At the same time tax credits for buying solar-fired heaters would be raised by 10 percentage points to 50 percent in 2006.

As private cars account for 60 percent of carbon dioxide emissions, a new law will make it obligatory to label new cars according to emissions by June 2006, the government said.

D. Biofuels Bill Passed by Philippines House

On November 8th, the Philippines' House of Representatives passed legislation to require that gasoline be blended with 5 percent ethanol. The bill now moves to the Senate and if approved there, consolidated legislation would then need to be signed by President Arroyo.

House Bill 4629 was "unanimously approved" by the 250-member House and brings the country a step closer to "mass production of alternative fuels and renewable energy," according to its main proponent, Congressman Jose Miguel Zubiri.

"The core of the legislation is the mandatory blending of gasoline with bio-ethanol within two years after it is finally enacted into law," he said, adding that the ethanol mixture

could be increased to 10 percent two years thereafter or upon the recommendation of the proposed National Biofuels Board.

Zubiri, who belongs to President Gloria Arroyo's ruling party, said the bill was in line with the government's efforts to identify alternative sources of energy to wean the country off of imported oil.

The House legislation offers tax incentives for investments in the biofuels sector. It also calls for the sector to be designated as a "pioneering and preferred area for investment," which entails special access to government credit. The bill would exempt biofuel from consumer taxes, but also calls for a "tariff shield" to protect domestic bioethanol producers.

At least two bio-ethanol plants are now under construction in the central island of Negros, a major sugar growing area. These are expected to produce 30 million liters annually of ethanol for Petron Corp., an oil company that is partly owned by the government.

There is yet no timetable for the Senate to vote on its version of the bill.

E. Czech 'Green Tax' Plan Would Target Dirtier Energy

The Czech Environment Ministry plans to present a draft "Green Tax" bill to the government before the end of the year, Environment Minister Libor Ambrozek told reporters Oct. 27. The proposed taxes will in particular target nonrenewable energy sources. For example, it would raise the tax on electricity produced from brown coal sevenfold by 2015. Energy from natural gas would also be taxed, although at a lower rate. Energy from alternative sources, on the other hand, would not be taxed at all. The proposal also calls for a tax on all private vehicles. Currently, only commercial vehicles pay a road tax. Taxes on mass transit and on vehicles running on biofuels, propane-butane, or natural gas would be lower. One problem, however, is that the government has called for the Green Tax to be revenue neutral so as not to increase the already high tax burden. This would require lowering other taxes, which the government has so far been reluctant to do.

F. Czech Senate Considers Legislation on Biofuels

The Czech Senate is reviewing a law that would allow the addition of grain alcohol in petrol and of methylester from rapeseed oil to diesel fuel starting in 2007. Czech Agriculture Minister Petr Zgarba told reporters that the amount of biofuels added to fossil fuels would depend on production capacities, but that it could range from 2 percent to 5 percent. The law is in line with the EU policy statements to replace 5.75 percent of its fossil fuels with biofuels by 2010. The Czech Parliament approved the law on October 19th and the Senate has 30 days to rule on it.

G. Indonesia Drafting Plans to Boost Production Of Biofuel

Indonesia is drafting plans to expand oil-palm plantations by 60 percent in five years to boost biofuel production, though questions remain over feasibility and environmental impact. Agriculture Minister Anton Apriyantono told reporters on October 26th that the

government was drafting a plan to encourage the development of the biofuel industry by increasing palm oil cultivation, bringing the total area of oil palm plantations in Indonesia from about 5 million hectares to over 8 million hectares by 2010.

The plan is intended to reduce Indonesia's dependence on oil imports and to meet growing demand for palm oil exports, which reached 9 million metric tons last year.

The plan will include a proposal first publicized in August to establish what would be the world's largest oil palm plantation on the island of Borneo, along the Indonesia-Malaysia border. The plantation would cover nearly 2 million hectares and produce $4.6 billion worth of palm oil per year.

But environmental groups are warning it would devastate miles of virgin forests and wildlife. "Such a project could have long-lasting, damaging, consequences for the people who depend on the area and its massive water resources, which feed the whole island," the environmental group WWF said in an August 12 statement.

But the executive director of industry body the Indonesian Palm Oil Commission (IPOC), Rosediana Suharto, said that IPOC and the WWF would be working with the government to ensure the environmental impacts of new plantations were minimized. "The government has formed a consortium which will start to carry out feasibility studies to find out how many hectares can be planted with oil palm and rubber, taking special care of high conservation value forests, including protected forests, national parks, endangered species, and water resources," she said. "Input will come from us and the WWF."

Suharto said it would be "very difficult" for the government to significantly increase palm oil cultivation unless it was prepared to take over underutilized land occupied by "hit and run" growers. Many producers are also still waiting for clear legislation to be issued on the mixing of palm oil with diesel and gasoline to produce biofuels, she added.

H. Report Sees Record Investment, Growth In Renewable Energy Worldwide

Global investment in renewable energy reached a record $30 billion in 2004, due in large part to growing government support for renewables, according to a report released on November 6th by the Renewable Energy Policy Network for the 21st Century (REN21). "Renewable energy has become big business," Eric Martinot, the lead author for Renewables 2005: Global Status Report, said.

Wind, solar, biomass, geothermal, and small hydro technologies provided about 4 percent of the world's electricity-generating capacity, the report says. About 40 million households heat their water with solar collectors, according to the report. Researchers found the fastest-growing energy technology in the world to be solar photovoltaic, which grew in existing capacity by 60 percent from 2000 to 2004 and covers more than 400,000 rooftops in Japan, Germany, and the United States. Wind power, which grew by 28 percent in 2004, was second.

Martinot, a Worldwatch Institute senior fellow and Tsinghua University lecturer, said General Electric Co., Siemens, Sharp Corp., and the Royal Dutch Shell Group were among the large companies attracted to renewable energy.

The report emphasizes government support for renewables, saying about 48 countries have a renewable energy promotion policy. Most have set targets for shares of electricity generation at 5 percent to 30 percent.

I. World Bank Doubles Renewable Energy Commitments

The World Bank Group in fiscal year 2005 doubled its commitment to renewable energy and energy efficiency over FY 2004 levels, the group said on October 31st. Commitments totaled $748 million, about 2.2 times the 2004 commitment of $339 million. The FY 2005 total includes $449 million for hydro units with capacity larger than 10 megawatts per plant; $212 million for renewable energy units with capacity smaller than 10 Mw per plant; and $87 million for energy efficiency, the World Bank said. As part of the Bonn Commitment of 2004, the World Bank said it would ramp up renewable energy and energy efficiency commitments by 20 percent annually over five years beginning in FY 2005. The Bonn Commitment also called on the World Bank to lead the Renewable Energy and Energy Efficiency Financing and Policy Network for developing countries.

J. Paraguay Takes Steps to Promote Biofuels

In October Paraguay passed legislation to promote the use of biodiesel and announced plans to increase the portion of biofuel in gasoline. The Biofuels Promotion Law of October 7 states that diesel will have to be mixed with a percentage of biofuel that will be determined by the Industry and Commerce Ministry and which may vary according to availability. The legislation also offers tax cuts to support the transition. The legislation also includes provisions to strengthen a 1998 decree requiring biofuel in gasoline. President Nicanor Duarte Frutos announced plans to earmark US $6 million to help the state-run oil company Petroleos Paraguayos (Petropar) boost its alcohol production capacity to increase the amount of alcohol in gasoline from the current 18 percent to 24 percent.

K. Report: Malaysia to switch to bio-diesel

Malaysia will switch to bio-diesel next year - a year ahead of schedule - with government vehicles slated to start using the palm oil-laced fuel to cushion the impact of rising fuel prices, a news report said Wednesday.

The government was expected to save "hundreds of millions of ringgit" through cutbacks in oil subsidies by convincing Malaysians to switch to bio-diesel, a technologically proven mixture of diesel and palm oil, said Peter Chin, the plantations, industries and commodities minister, according to the Star, a Malaysian newspaper. One ringgit is currently worth 26 U.S. cents.

Bio-diesel is a mixture of 5 percent palm oil - used in cooking - and 95 percent diesel, but Chin said eventually the fuel will be made of 20 percent palm oil and 80 percent diesel.

Diesel powered vehicles belonging to the ministries of transport, defense and plantations, industries and commodities, will begin using bio-diesel next year before the alternative fuel is introduced to the public, the report said.

The government had planned to start using bio-diesel only in 2007 "but because our plans are going very well, it seems that we can start way ahead of schedule," Chin told the daily.

Malaysia imports most of its diesel fuel but it's the world's biggest producer of palm oil. The government says that adding palm oil to diesel fuel would reduce consumption by about 418,000 liters (110,427 gallons) a year.

Industries used 2.8 billion liters (0.74 billion gallons) of diesel last year, while others who qualified for subsidized diesel, like public transport operators, consumed 5.56 billion liters (1.47 billion gallons).

The government has said that it cannot maintain the subsidies, which keep gasoline prices in Malaysia among the lowest in the region.

79. World Trade Organization Drafts Weak Environment Chapter

On November 3rd, the chairman of the World Trade Organization's negotiating group on trade and the environment circulated the first draft of what will become the environment chapter of a declaration to be issued at a Dec. 13-18 WTO ministerial conference in Hong Kong. The one-page text from the chairman, Bangladesh's WTO ambassador Toufiq Ali, calls on WTO members to intensify negotiations on the reduction or elimination of tariff and non-tariff barriers to environmental goods and services, as mandated under the 2001 ministerial declaration launching the Doha Round.

The text however would leave it up to ministers in Hong Kong to decide whether such negotiations should include an agreement on a list of environmental goods or services to be covered by the market-access initiative.

The draft text would also have ministers recognizing progress achieved so far in other environment-related negotiations under the Doha mandate, including on negotiations on the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements (MEAs), and on the development of procedures for regular information exchange between MEA secretariats and the relevant WTO committees. The text provides no instructions for further work in these two areas.

The ambiguous language on the tariff initiative, and in particular on efforts to draw up a list of possible goods and services to be covered by the initiative, reflects important differences between WTO members on the issue. Some developing countries, most notably India, are resisting the idea of lowering or eliminating tariffs on environmental goods and services, as advocated by the United States and the European Union.

In an earlier report to the WTO's Trade Negotiations Committee, the body responsible for overseeing the Doha Round negotiations, Ali identified the tariff initiative and the development of a list of environmental goods to be covered by the initiative as the most

likely candidate for tangible progress on trade and the environment at the Hong Kong meeting.

In July 2003 the United States proposed that goods used for environmental remediation or pollution prevention and "clean technologies" be considered "core" environmental goods where tariffs should be eliminated as soon as possible, and no later than 2010. The United States also proposed that WTO members draw up a list of "complementary" environmental goods where WTO members would be required to eliminate tariffs on a certain percentage of these goods by 2010.

However, officials said that developing countries have become more skeptical about the tariff initiative, arguing that some developed countries were using the talks as a cover for securing tariff cuts on goods which were not environment-related and which should instead be addressed in the Doha Round talks on market access for non-agricultural goods (NAMA). In a submission to the negotiating group earlier this year, India said there was a "growing feeling" among developing countries that the negotiations have "focused on goods which are likely to give highly industrialized countries a comparative advantage."

Many of the items suggested for inclusion in the list have dual use, India noted. "Though these items may be utilized for an environmental purpose, other industrial applications of such goods are also significant. Examples include electricity meters, liquid flow meters, heat exchangers, conveyers, and centrifugal drums."

The biennial ministerial conference is the most important decision-making organ of the WTO. Ministers in Hong Kong will be expected to provide enough guidance for the negotiations on trade and environment and other sectors so that the Doha Round can be completed by the end of 2006 at the latest.

80. WHO Says Global Warming Linked To 150,000 Fatalities; Poor Most Affected

Earth's warming climate is estimated to contribute to more than 150,000 deaths and 5 million illnesses each year, according to the World Health Organization, a toll that could double by 2030. The data, published in the journal Nature, indicate that climate change is driving up rates of malaria, malnutrition and diarrhea throughout the world.

Health and climate scientists at the University of Wisconsin at Madison, who conducted one of the most comprehensive efforts yet to measure the impact of global warming on health, said the WHO data also show that rising temperatures disproportionately affect poor countries that have done little to create the problem. They reached their conclusions after entering data on climate-sensitive diseases into mapping software.

The regions most at risk from climate change include the Asian and South American Pacific coasts, as well as the Indian Ocean coast and sub-Saharan Africa because climate-sensitive diseases are more prevalent there and because those regions are most vulnerable to abrupt shifts in climate. Large cities are also likely to experience more severe health problems because they produce what scientists refer to as the urban "heat island" effect.

Just this week, WHO officials reported that warmer temperatures and heavy rain in South Asia have led to the worst outbreak of dengue fever there in years. The mosquito-borne illness, which is now beginning to subside, has infected 120,000 South Asians this year and killed at least 1,000, WHO said.

Senior U.S. and international officials said they now regard climate change as a major public health threat. In an interview this week, Howard Frumkin, who directs the National Center for Environmental Health at the Centers for Disease Control and Prevention, called it "a significant global health challenge."

81. IEA Issues World Energy Outlook - 2005

“The importance of the Middle East and North Africa (MENA) to global oil and gas markets cannot be underestimated. These countries have vast resources, but these resources must be further developed. Investment should not be delayed,” said Mr. William C. Ramsay, Deputy Executive Director of the Paris-based International Energy Agency, as he presented findings from the World Energy Outlook 2005: Middle East and North Africa Insights (WEO-2005) in London. Noting that a lack of investment in upstream and downstream capacity has contributed to the extreme tightness in the global oil market in recent months, Mr. Ramsay highlighted the critical role that this region will play in meeting growth in global energy demand.

The WEO-2005 expects global energy markets to remain robust through 2030. If policies remain unchanged, world energy demand is projected to increase by over 50% between now and 2030. World energy resources are adequate to meet this demand, but investment of $17 trillion will be needed to bring these resources to consumers. Oil and gas imports from the Middle East and North Africa will rise, creating greater dependence for IEA countries and large importers like China and India. Energy-related CO2 emissions also climb -- by 2030, they will be 52% higher than today. “These projected trends have important implications and lead to a future that is not sustainable – from an energy-security or environmental perspective. We must change these outcomes and get the planet onto a sustainable energy path,” added Mr. Ramsay.

WEO 2005 focuses on the energy prospects in the Middle East and North Africa to 2030, covering in detail developments in Algeria, Egypt, Iran, Iraq, Kuwait, Libya, Qatar, Saudi Arabia and the United Arab Emirates. Internal demand, resources, policies, investment, production, exports, even energy use for water desalination, all are examined. “To our knowledge, this is the first time that any publication with a focus on the Middle East and North Africa has undertaken such an extensive, country-by-country review of the energy sector of the region. At a time when experts debate whether the world will run out of energy, these results are particularly relevant,” Mr. Ramsay said.

In the MENA region, domestic energy demand is driven by surging populations, economic growth and heavy energy subsidies. Primary energy demand more than doubles by 2030. At the same time, MENA oil production will increase by 75% by 2030 and natural gas production will treble, allowing more gas exports. The region’s share in global oil production will increase from 35% today to 44% in 2030. However, this means the countries of the Middle East and North Africa would need to invest, on average, $56 billion per year in energy infrastructure. The level of upstream oil investment required will be more than twice that of the last decade.

But what if adequate investment is not made or consuming countries' policies change? To assess these risks, WEO 2005 develops two other scenarios, each of them far from unlikely: a Deferred Investment Scenario, in which investment in the producing countries is delayed, whether deliberately or inadvertently; and a World Alternative Policy Scenario, in which energy-importing countries take determined action to cut demand and change the pattern of fuel use, driven by high prices, environmental or security goals, or all three.

The two scenarios have significant implications for MENA countries. In the Deferred Investment Scenario, energy prices rise sharply. Global energy-demand growth falls, cutting the region's oil and gas export revenues by more than $1 trillion from 2004-2030. World GDP growth slows down. Deferred investment could be the result of many factors, but whatever the cause, the results are higher prices, greater uncertainty and market inefficiencies.

The WEO World Alternative Policy Scenario examines the consequences of new policies under consideration in consuming countries. "The G8 Plan of Action, agreed at the Gleneagles Summit in July 2005, launched detailed initiatives to promote cleaner energy and combat the impact of climate change. The IEA was asked to play an important role. This strong global commitment indicates that governments are already adopting alternative policies – such as those in the World Alternative Policy Scenario – to achieve the G8 goals," explained Mr. Ramsay. Under this Scenario, global oil and gas demand growth is lower, but the world continues to rely heavily on MENA oil and gas. CO2 emissions fall 16% below the level of the Reference Scenario – but still increase around 30% by 2030.

Assumptions about international energy prices have been revised significantly upwards in WEO-2005, as a result of changed market expectations after years of underinvestment in oil production and the refinery sector. The average IEA crude oil import price, a proxy for international prices, averaged $36.33 per barrel in 2004 and peaked at around $65 (in year-2004 dollars) in September 2005. In the Reference Scenario, the price is assumed to ease to around $35 in 2010 (in year-2004 dollars) as new crude oil production and refining capacity comes on stream. It is then assumed to rise slowly, to near $39 in 2030. In the Deferred Investment Scenario the oil price reaches $52 in 2030.

82. U.N. Climate Secretariat Sees Growing Emissions in Developed World

Greenhouse gas emissions from the 40 developed countries that are party to the U.N. Framework Convention on Climate Change declined between 1990 and 2003 but are forecast to rise sharply by the end of the decade, according to a U.N. report released Nov. 17. According to the report by the UNFCCC secretariat, emissions in those countries fell an average of 5.9 percent between 1990 and 2003 but are expected to rise 10.6 percent above 1990 levels by 2010.

The report, titled Key GHG Data, noted that the reduction as of 2003 was due almost entirely to the industrial slowdown experienced in the early 1990s in the formerly communist countries of Eastern and Central Europe. Emissions dropped 39.6 percent in those economies in transition, while rising 9.2 percent in other developed countries over the period. However, emissions in both types of industrialized economies are expected

to rise over the next five years, though it added that specific projections may be changed when countries submit their "fourth national communications," as they are expected to do by Jan. 1, 2006.

The report contains emissions information submitted to the Bonn, Germany-based UNFCCC secretariat by the convention's signatory governments. It covers emissions in 161 developed and developing countries.

The 40 developed countries listed in the convention's Annex I are required to submit emissions data annually. Developing-country, "non-Annex I" parties to the treaty have only been required to submit data once or twice since 1990, depending on individual agreements. There are 148 non-Annex I parties, but only 121 submitted data in time for the figures to be included in the report.

The report contains more detailed information on the 40 Annex I parties, which includes some countries, like the United States, that have ratified the UNFCCC but not the Kyoto Protocol. The Kyoto accord, which serves to implement the U.N. framework convention, requires Annex I parties collectively to reduce emissions 5.2 percent below 1990 levels by the end of the 2008-2012 period.

The data show a large degree of variation in the emissions trends of different developed countries. Just over half of these countries saw emissions reductions, with the three Baltic states leading the way. Estonia, Latvia, and Lithuania each saw a drop in emissions of more than 50 percent.

The European Union as a whole saw emissions drop by 1.4 percent, and among its larger economies, Germany led the reducers by cutting emissions 18.2 percent and the United Kingdom came in second with a 13.0 percent decline. Spain, meanwhile, saw emissions rise by 41.7 percent, Portugal 36.7 percent, Greece 25.8 percent, and Ireland 25.6 percent.

Canada, Australia, and New Zealand all saw emissions rise by more than 20 percent, while the United States saw emissions rise by 13.3 percent and Japan by 12.8 percent.

Of all greenhouse gas emissions in developed countries, carbon dioxide was by far the most significant, accounting for 82.7 percent of all emissions in terms of greenhouse capacity. Methane accounted for 10.0 percent, and nitrous oxide for 5.6 percent.

The energy sector was responsible for 84.4 percent of emissions, but **the largest increase was seen in the transportation sector**, where emissions rose 20.7 percent.

83. IEA Says Cap-and-Trade Schemes Central To Efforts to Stem Global Warming

According to a report published on November 24th by the International Energy Agency, emissions trading will remain at the core of international efforts to combat global warming; but future trading systems are likely to cover emissions from a much wider range of economic activities, particularly in the transport sector.

In the report, Act Locally, Trade Globally--Emissions Trading for Climate Policy, the Paris-based IEA suggested that emissions trading will be "a necessary element" of all

future plans to control carbon dioxide emissions, which are expected to increase by about 50 percent globally by 2030 under current energy policies.

The IEA, which is the energy arm of the 30-member Organization for Economic Cooperation and Development, suggested that future emissions trading systems may be forced to tackle CO2 emissions from the aviation and road transport sector, which comprise much of the growth of global emissions. "Transport is a priority for climate policy, being responsible for a quarter of global CO2 emissions, and the second-fastest growing source after power and heat generation," according to the report.

Including the aviation sector in future emissions trading systems could reduce global emissions by anywhere from 0.2 percent to 3 percent, with most reductions in the short term coming as purchases of credits from other sectors, according to the report. Over the long term, the IEA believes that aviation firms would take operational and technical measures to reduce emissions internally, with costs at least partly passed on to consumers.

On the road transport side, the IEA suggests that automobile manufacturers may eventually be held partly "responsible for the CO2 emissions of their products." The IEA suggested that creation of "cap-and-trade" systems could establish a maximum ceiling on vehicle emissions and then obligate car makers to reduce the emissions potential of their annual sales or buy credits from other sources to come in under this level.

While the IEA does not see implementation of cap-and-trade systems on new cars as a replacement for better public transport or urban planning, it does suggest that the trading mechanism represents a faster means of convincing car markers to improve technology and curb transport emissions.

84. Goldman Sachs Calls for Urgent Action on Greenhouse Gases

On September 22nd, the global investment banking firm Goldman Sachs issued an overall environmental policy that calls in particular for urgent action to address climate change, which it calls a "threat to our natural environment, to humans, and to the economy."

According to the "environmental policy framework," the 24,000-employee firm will set aside up to $1 billion to invest in renewable energy and energy-efficiency projects, and will pledge to reduce indirect greenhouse gas emissions from its leased or owned offices by 7 percent of 2005 levels by 2012.

Goldman Sachs also said it would establish and fund a Center for Environmental Markets to undertake independent research with partners in the academic community and nongovernmental organizations. The research will seek to develop policy options for "establishing effective markets around climate change, biodiversity conservation, and ecosystem services," the statement said.

"At the same time, we recognize that the climate change problem cannot be solved through voluntary action alone," it said, adding that it would therefore work with others to "help identify and promote effective and efficient regulatory/policy approaches to reducing greenhouse gas emissions."

The concept of division of responsibility between the private sector and governments runs throughout the policy statement, which urges "a strong policy framework" to encourage conservation and energy efficiency as part of a comprehensive, global approach.

"Markets are particularly efficient at allocating capital and determining the appropriate prices for goods and services we purchase," the policy said. "The government can help the markets in this regard by establishing a strong policy framework that creates long-term value for greenhouse gas emissions reductions and consistently supports and incentivizes the development of new technologies that lead to a less carbon-intensive economy."

In a step aimed at boosting investment research, the firm said it would increase its commitment to incorporating "environmental, social, and governance criteria into fundamental analysis of companies." Those factors will play a growing role in investment banking, the firm suggested. "We believe that companies' management of environmental and related social risks and opportunities may affect corporate performance," Goldman Sachs said. "We further believe that the management of risks and opportunities arising from climate change and its regulation will be particularly significant and will garner increasing attention from capital market participants."

The policy also addresses investment policies concerning environmentally sensitive sites, forest resources and illegal logging, international environmental agreements, and the rights of indigenous peoples.

85. Agreement Reached to Begin Negotiations on Post-2012 Commitments

The annual U.N. Climate Change Conference ended Dec. 10, a day late, with an agreement from 157 countries to begin discussions on post-2012 commitments and a separate agreement from the United States to participate in a "dialogue" on how to best combat climate change. The text of the agreement on negotiations regarding what will follow the Kyoto Protocol's 2008-2012 commitment period did not include a final target date, but it did say there should be "no gap" in commitment rules, which would necessitate a conclusion several years before 2012 to allow preparations for a clean transition.

The conference, which served as the First Meeting of the Parties to the Kyoto Protocol (MOP-1), was required to "initiate consideration" of post-2012 under the treaty's Article 3.9. Agreement on the topic was only reached the morning after the conference was scheduled to conclude.

The agreement also contained a provision requiring developing countries to take steps "on a pathway ... toward voluntary reductions." Parties will now be called on to submit proposals on how developing economies can participate. Formal talks on incorporating developing countries in the Kyoto process are due to start at the MOP-2 meeting in late 2006.

At the two-week meeting, the 157 parties to the Kyoto Protocol also adopted some 35 other measures.

- Under an agreement on compliance, parties that fail to meet their Kyoto-mandated emissions reduction targets during the 2008-2012 commitment period will be required to make those reductions plus a 30 percent penalty in the following period.
- Delegates also agreed to carry out a five-year study on adaptation to climate change and to formally study the technology of carbon capture and storage.
- Furthermore, developed countries agreed to continue to fund the operation of the Clean Development Mechanism Executive Board with a commitment of $13.2 million between 2006 and 2007. Delegates also streamlined the process for approving CDM methodologies. Kyoto's CDM provisions allow developed countries to get credit for supporting projects to cut greenhouse gas emissions in developing countries.

The MOP-1 meetings also served as the 11th Conference of the Parties to the UNFCCC.

The 189 parties to UNFCCC, which includes the United States, adopted a separate 14 measures, including one to "engage in a dialogue, without prejudice to any future negotiations, commitments, process, framework, or mandate under the Convention, to exchange experiences and analyze strategic approaches for long-term cooperative action to address climate change."

The agreement, reached at the end of the U.N. Climate Change Conference, pledges U.S. participation in four high-level workshops over two years even though U.S. negotiators initially indicated they would not agree to any such talks. The agreement came after concessions by other parties to accommodate the Bush administration's position that talks should recognize "a diversity of approaches" on global warming.

The climate change workshops established by the agreement call for the meetings to be led by two co-facilitators, one each from a developed and developing nation. Those facilitators would report to the next two annual U.N. Climate Change Conferences.

The workshops will focus on four broad areas: sustainable development, adaptation, technology, and market-based opportunities.

86. Catalytic Converters Emit Low Levels Of Toxic Metals, Chemical Society Says

Catalytic converters used to control automobile emissions emit low levels of toxic metals, according to a study published on December 15th by the American Chemical Society. In the report[2], Swedish and American scientists said they detected the heavy metals platinum, palladium, rhodium, and osmium in the air over the metropolitan Boston area.

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[2] "Platinum Group Element Concentrations and Osmium Isotopic Composition in Urban Airborne Particles from Boston, Massachusetts", Sebastien Rauch,*†‡ Harold F. Hemond,‡ Bernhard Peucker-Ehrenbrink,§ Kristine H. Ek,† and Gregory M. Morrison† , *Water Environment Technology, Chalmers University of Technology, 412 96 Göteborg, Sweden, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, and Department of Marine Chemistry and*

Sebastien Rauch, a professor at Chalmers University of Technology in Göteborg, Sweden, noted that the levels detected for these pollutants is below the level of concern for effects on human health. Rauch cited "a lot of unknowns," however, saying the emissions need more study. While the metals are present in only "a few picograms per cubic meter" of air, short-term exposure to high levels of the metals can be lethal, Rauch said. More research is needed on the effects of long-term exposure at low levels, he said.

Rauch said the platinum group levels measured in Boston are from catalytic converters because no other sources of emissions could account for them. In addition, Rauch said the research team took sediment core samples from Upper Lake Mystic near Boston and found the metals were present in significantly larger amounts after 1975, when catalytic converters came into use.

In addition, samples taken around the world show higher levels of platinum group elements in recent decades. Rauch said several studies, including some in which he participated, have shown platinum group levels similar to those in Boston in the air over cities in Europe, Japan, Australia, China, and Ghana.

87. BP Outlines $8 Billion Investment Plan for Green Energy Projects

BP chief executive John Browne said on November 29th that his company will invest $8 billion over the next decade in alternative and renewable energy projects. "Our aim is to become the leading player in alternative energy in the power sector on a global basis," Browne told a standing-room only crowd at the Brookings Institution.

BP will invest $1.8 billion over the next three years to accelerate the development of technologies for solar, wind, combined-cycle natural gas turbines, and co-generation, Browne said. The company also will work on carbon sequestration technology, which involves capturing and storing carbon dioxide emissions.

The company has created a new business group, BP Alternative Energy, and set a goal of $8 billion in sales over the next decade. BP expects its solar division, which has 10 percent of the world market, to hit $1 billion in revenues in 2008.

BP plans to introduce new products to the U.S. marketplace, hoping to convince state regulators and businesses to purchase electricity from less-polluting sources and to buy alternative energy products, he said. The U.K. company is also teaming up with U.S. retailers such as Home Depot to encourage customers to add solar energy components to their homes, he said.

Browne also said he supports the idea of placing a fee on the burning of coal to offset the impact of releasing more carbon dioxide in the atmosphere, which places him at odds with most of the U.S. business community, Congress, and the White House. A fee of approximately $30 per ton of coal burned for power generation would help to level the

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Geochemistry, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts 02543, Environ. Sci. Technol., 39 (24), 9464 -9470, 2005. 10.1021/es051310q S0013-936X(05)01310-6

playing field for alternative fuels, which are overpriced unless "externalities" such as air pollution are considered, Browne said.

BP's new business will focus primarily on alternatives for power generation rather than for transportation fuels because the company sees a tremendous opportunity for growth in the worldwide power sector. Electricity demand is growing rapidly as more nations prosper, while a generation of older power plants will need to be replaced, Browne said. BP estimates that more than 40 percent of the entire world's generation capacity will be replaced or built for the first time by 2020.

According to BP, more than 40 percent of all carbon dioxide emissions come from the power sector, compared to less than a quarter from transportation. In contrast, the ability of renewable fuels to seize a large portion of the transportation market is still unclear, and the policy debate over the right mix of alternative fuels will continue for some time, Browne predicted.

Today, the world uses 85 million barrels of oil, with over half supplied by international trade, Browne said. Almost 80 percent of that trade comes from three areas: Russia, West Africa, and the Persian Gulf. By 2020, about 25 million barrels a day--or almost one in three--will come from Saudi Arabia, Iraq, and Iran, according to BP.

At various times over the past 18 months, the margin of spare capacity in the world oil market has fallen from the historic norm of 3 million barrels per day to around 1 million per day, Browne said. Combine the geographic concentration of oil supply with economic growth in developing nations like China and India, an increasing world population, rising global prosperity, as well as environmental concerns, and there is "a mixture of different reasons the energy outlook is uncomfortable," Browne said.