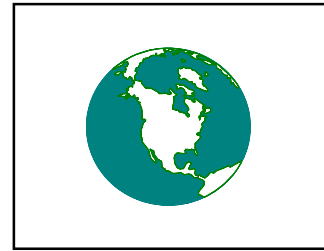


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# CAR LINES

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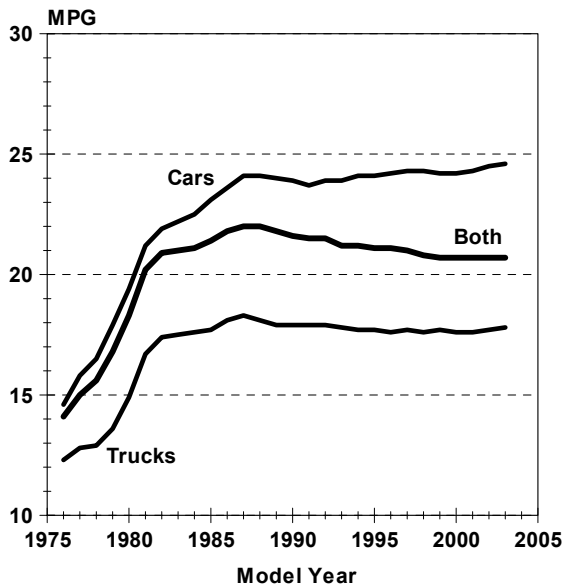
Issue 2004 - 2

April 2004

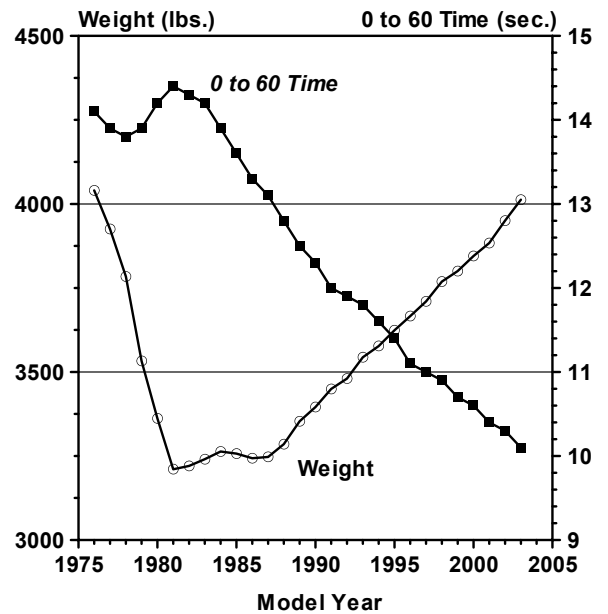
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## US Light Duty Vehicle Fuel Economy And Performance Trends

**Adjusted Fuel Economy by Model Year**  
(Three-Year Moving Average)



**Weight and Performance**  
(Three Year Moving Average)



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## EUROPE

### 1. New U.K. Budget Raises Clean-Fuel Incentives

Britain's 2004 budget report calls for changes to vehicle fuel taxes to encourage use of cleaner fuels and relaxes requirements for energy-intensive companies to join "climate change agreements" to lower emissions in exchange for lower taxes. Apart from that, however, the budget announced March 17 by Chancellor of the Exchequer Gordon Brown freezes most taxes at current rates and does little to alter existing financial incentives to address environmental concerns.

Under the new budget proposal, tax rates for certain types of gasoline will be raised to encourage the use of sulfur-free fuels. The tax rate for ultra-low sulfur fuels will be established at 0.5 pence per liter (about \$0.04 per gallon) above the level for sulfur-free fuels to encourage the development of a market for cleaner sulfur-free cars. Beginning Sept. 1, ultra-low sulfur diesel will be taxed at 1.9 pence per liter (about \$0.15 per gallon), and sulfur-free diesel at 1.4 pence per liter (about \$0.11 per gallon).

According to the budget, this incentive should lead to sulfur-free fuels "becoming the standard specification for road fuels in the United Kingdom by the end of the year, well ahead of their mandatory introduction on Jan. 1, 2009. This will bring significant improvements in air quality and major savings in carbon dioxide."

However, the budget document said it is "unlikely" that the government will be able to meet other targets for nitrogen dioxide and particulates in some parts of the country, particularly in urban areas. "In order to tackle these pollution hotspots, and achieve further general air

quality improvements, the government is reviewing measures in the air quality policies and its ten-year plan for transportation," Brown said in his budget statement.

Under the new budget, other financial incentives introduced in recent years to encourage the adoption of cleaner technology will remain generally unchanged. According to the budget, growth in the natural gas sector has been slow, but the government expects the number of natural gas vehicles to continue to grow in part due to vehicle conversion grants and an existing tax break for natural gas. "The government expects that this high level of support will secure the investment in advanced natural gas vehicles needed to deliver the significant environmental benefits they produce compared with diesel vehicles," the budget said.

The 2003 pre-budget report called for a gradual reduction of taxes on liquid petroleum gas over the next three years. The 2004 budget confirmed these reductions. The latest budget also maintains a vehicle excise duty established in 2001 based on carbon dioxide emissions and fuel type. It also confirmed that a tax incentive for biodiesel introduced in 2002 will remain in place until at least 2007.

### 2. European Parliament Approves Onboard Diagnostics For Trucks

The European Parliament approved a directive March 9 specifying technical requirements for engine exhaust monitoring equipment that must be fitted to trucks and other heavy commercial vehicles from Oct. 1, 2005. The new directive is likely to be signed into law by EU ministers in the coming weeks. EU member states would then have to transpose its requirements into national law within 12 months.

Upon taking effect, the directive would require "on-board diagnosis" (OBD) systems for vehicles to monitor for problems that could allow emissions to exceed standards. Starting Oct. 1, 2008, OBD systems would be required to detect "deterioration" in the effectiveness of the exhaust after-treatment system.

A directive requiring OBD systems to be fitted to new commercial vehicle models starting in 2005 was passed Dec. 13, 1999 (Directive 1999/96/EC). The directive required the executive European Commission to draft test methods, performance standards, and durability requirements in time for industry to meet the 2005 deadline.

German lawmaker Bernd Lange, a leading member of the Parliament's Environment Committee, recommended approving the draft but added that the Commission should have published the draft by the end of 2000. The three-year delay presented the Parliament with a *fait accompli* since, with elections due in June, lawmakers would not have time to invoke their strongest amending powers to secure major changes, as favored by the Environment Committee, he said.

To save the draft from lapsing, lawmakers decided not to pursue most of the Environment Committee's suggested amendments. Instead, lawmakers settled for milder amendments, such as the deletion of obsolete sections, which had been agreed in advance with the EU ministers who must now approve the draft.

One change the Environment Committee sought that it had to abandon would have forced the Commission to present proposals this year for longer-term limits on NOx and particulate emissions. The current draft only provides for review of limits, without

setting a deadline.

### 3. Italian Environmentalist's Report Highlights Transport as Problem

Italy's largest environmental lobby group on March 11 released its annual assessment of the country's environmental health, describing worsening greenhouse gas emissions and problems with Italy's transportation, energy, and environmental policies. *Italian Environment 2004*, issued by the nongovernmental organization Legambiente, was issued one week after Italy's Environment Ministry released its *Environmental Data Yearbook*.

While the two reports do overlap, the Legambiente report attempts to provide more context, comparing Italy's performance in many areas with other European countries. The Legambiente report estimates that Italy's emissions rose 7.3 percent from 1990 to the end of 2003, which is slightly higher than the government's 6.9 percent estimate. Both indicated that it will be difficult for Italy to reach its Kyoto Protocol target of reducing carbon dioxide emissions by 6.5 percent from 1990 levels over the period 2008-2012. The report also said that Italy's energy intensity--the amount of energy used to produce a unit of gross domestic product--rose slightly between 2002 and 2003, fitting into a trend that has seen the figure rise 12 percent over the 20-year period ending in 2003. That compares with a downward trend in the European Union as a whole, the report said.

The report also highlighted what it described as inefficiencies in Italy's transport sector. According to the report, Italy is more dependent than other European countries on road transportation, which is the most polluting and least efficient form of

transportation. The report says 75.6 percent of Italy's commercial transportation is by road, compared with 69.3 percent in Spain, 68.6 percent in Germany, and 64.5 percent in Great Britain.

#### **4. Russia Sees No Gain From Kyoto Ratification**

Russia will not ratify the Kyoto Protocol until there is a proven market for Russia's massive emissions credits, according to a senior member of Russia's Climate Change Commission. Sergei Roginko, who also serves as the chairman of Russia's committee on joint implementation, addressed a special roundtable discussion on air quality, climate change, and transport at the March 4-6 International Forum on Partnerships for Sustainable Development at the U.N. Food and Agriculture Organization in Rome.

Roginko said that ratifying the protocol no longer made economic sense for Russia. "When Russia signed the Kyoto Protocol in 1997, it was because it looked like a nice situation for Russia," he said. "Russian emissions levels were very low, and it looked like there would be a huge market for the credits from those emissions. But that is no longer true."

The biggest blow to the development of what could have been the market for Russia's emissions credits came in 2001, when the United States--which would have needed to buy large amounts of greenhouse gas credits in order to reach Kyoto targets--announced it would not ratify the Kyoto agreement. But the problem was made worse, Roginko said, when the European Union capped the amount of credits for emissions reductions its member nations could receive from non-EU nations at 20 percent of all

reductions, and then ruled that only 14 percent of the imported emissions credits can come from joint implementation.

"Since the United States is not a buyer for our credits, and Europe is a buyer for very few credits, it seems we were promised something that is not there," Roginko said.

Roginko dismissed arguments that Russia should ratify the protocol anyway, saying that the country's economic slowdown in the 1990s and the corresponding drop in emissions levels meant that Russia was doing its part. "Russia's emissions are lower than 1990 levels by nine billion tons of carbon," he said. "That is more than the rest of the world's emissions reductions combined ... it is the same as three Kyoto Protocols. I think Russia is doing its part for the good of the world, but in order to take this step [of ratification] we must be sure it makes sense to do so."

#### **5. Nitrogen Emissions Higher Near Airport Than in Central Paris**

Air pollution from nitrogen dioxide in communities adjacent to the principal airport serving Paris is more than 20 percent higher than that seen in the most polluted areas of the French capital, according to a survey by a leading air quality monitoring organization. The report released by Airparif, the nongovernmental agency which monitors air quality across the Ile de France, shows that aircraft, motorway, and rail traffic to and from Charles de Gaulle generates more than 4 percent of all air pollution in the Greater Paris region.

Airparif surveyed air quality at more than 200 sites in 54 municipalities covering more than 1 million people within a 5-kilometer radius of the airport.

While takeoffs and landings at the Charles de Gaulle International Airport, located north of Paris near the suburb of Roissy, have long been accused of creating high levels of noise pollution in neighboring communities, until recently there has been little proof of the airport's impact on air quality. The study showed that nitrogen dioxide pollution is 20 percent higher in rural areas near the airport than it is in the heart of Paris, one of Europe's most dense urban areas. In addition to causing respiratory ailments and lung damage, NO<sub>2</sub> contributes to formation of ground level ozone, or smog, and it can damage trees and crops.

The Airparif report also pointed out that roadways leading to the airport are more likely than any others in the Greater Paris Region to exceed maximum legal concentrations of key pollutants like benzene, carbon monoxide, and NO<sub>2</sub>, with "potentially preoccupying" levels of pollution seen during high traffic periods.

#### **6. Norway Considering Low Sulfur Fuel Tax Incentives**

The Norwegian government may offer oil companies tax incentives to sell low-sulfur fuels in an attempt to boost use of cleaner fuels and comply with European Union environmental legislation. Environment Ministry official Carine Withelmsen told the press that the government "is considering a tax incentive" related to low-cost fuels. In addition, Finance Ministry lawyer Fredrik Robsahm said the tax change could be included in the government's revised budget scheduled for release May 8. The change could come into force during 2004, he said.

Some of the world's largest oil companies operate on the Norwegian market and are actively pushing for the

change. Amerada Hess Corp., ChevronTexaco Corp., ConocoPhillips Co., ExxonMobil, and Marathon Petroleum Co. are all active in the Norwegian oil and gas exploration and refining industries. Norwegian Petroleum Institute General Secretary Erik Birkeland said that adjusting the tax scheme to make low-sulfur fuels competitively priced with higher-sulfur fuels would transform the country's fuel use, ending the country's use of higher-sulfur fuels "within months."

Norway is not an EU member state. But as a European Economic Area agreement participant, it must adopt virtually all EU environmental legislation in exchange for its inclusion in the EU's single market.

Changing fuel taxes has been shown to fundamentally influence the popularity of less environmentally harmful fuels. The German government in November 1999 approved legislation adding 3 eurocents (about 4 cents) in tax to fuel per liter with a sulfur content of more than 50 ppm effective Nov. 1, 2001, and it added a 3-eurocent tax to fuel with a sulfur content of more than 10 ppm effective Jan. 1, 2003. While the change led to short-term prices that were "slightly more expensive" at German filling stations due to necessary refinery investments by oil firms, competition and efficiencies gained by the new technologies have resulted in no sustained price increases. As a result, the entire market shifted to cleaner burning fuels, with virtually all gas sold in Germany having a sulfur content of 10 ppm.

#### **7. EU Approves German Plan to Exempt Biofuels From Taxes**

The European Commission has approved a plan by Germany to exempt a range of biofuels from European

Union excise taxes imposed on normal conventional energy products produced from fossil fuels. The Commission cited environmental benefits, including the contribution to reducing greenhouse gases, as a reason for allowing the exemption. The exemption will extend until 2009. However, the Commission insisted that the proportion of the reduced taxes be limited to cover the difference between the cost of producing energy from renewable sources and the market price of renewable fuels.

The Commission said the production costs of biodiesel without excise duty are calculated to be [Euros] 0.88 (\$1.12) per liter, which is equal to the market price of diesel from fossil fuels. Concerning bioethanol, production costs without excise duty are estimated at [Euros] 1.07 (\$1.36) per liter, which is equal to the market price of gasoline derived from fossil fuel.

Currently, there is neither significant production nor use of biofuels in Germany, as the current market share of biodiesel and vegetable oils does not exceed 2.5 percent in the German market for diesel fuel.

According to the Commission, the following products may be used as biofuels: vegetable oil methyl ester, which is also known as biodiesel; vegetable oil; bioethanol; biomethanol; ETBE (ethyl-tertio-butyl-ether); and synthetic fuels made from biomass materials, such as forestry and agricultural scrap. German production of bioethanol and ETBE are expected to be introduced in the market in the coming years, the Commission said.

#### **8. Netherlands to Push for Bigger Carbon Cuts As EU President**

The European Union needs to set

stricter targets for reducing carbon dioxide emissions in its next round of voluntary agreements with automakers, and the Netherlands plans to push for bigger cuts during its stint as EU president during the second half of the year, according to a senior Dutch official. "European vehicles have to become cleaner and quieter," State Secretary for Housing, Planning, and the Environment Pieter van Geel said after a working visit to Honda and Toyota factories in Japan. The Dutch environment secretary said carbon dioxide emissions from new cars must fall further after 2008/2009, when the current voluntary agreements between the European Union and European, Japanese, and Korean automakers expire.

In other comments, van Geel also said EU standards governing the noise level of tires need to be revamped and made tougher, another issue he plans to raise during the Dutch presidency of the EU during the last six months of 2004.

Van Geel also questioned the Netherlands' current excise tax on diesel fuel, stating that excise taxes should reflect emissions released by the fuel used and their environmental impact. As currently drafted, Dutch tax on diesel does not properly account for diesel emissions, he said. The problem is urgent in the Netherlands, especially because most new cars are powered by diesel. Diesel-powered cars emit 10 times more nitrogen oxides and 13 times more particulate matter than gasoline-powered cars. However, diesel cars emit less CO<sub>2</sub> than gasoline cars. In the short term, van Geel will discuss possible solutions with the Dutch Finance Minister Gerrit van der Zalm, such as an increase in the diesel excise tax or a premium on new cleaner diesel engines. A Memorandum on Traffic Emissions due in March will shed some light on the diesel issue, he said.



The automobile industry's commitment to reduce CO<sub>2</sub> emissions is the cornerstone of the EU's Strategy to Reduce CO<sub>2</sub> emissions from New Passenger Cars from 186 g/km in 1995 to 120 g/km by 2010. According to Van Geel, the average CO<sub>2</sub> emission standards in the agreements reached for the next period must be stricter. Road traffic in Europe causes one-fifth of the total CO<sub>2</sub> emissions, and passenger cars account for half of the road traffic emissions, he noted.

Van Geel said current EU standards for tire noise do not go far enough, noise from EU tires already are 2 decibels below the standards set in EU Directive 2002/49 Relating to the Assessment and Management of Environmental Noise. There are even tires on the market that have a 7 decibel lower level, he said.

### **9. EU Falling Short On Meeting Climate Emissions Targets**

The European Union and many of its Member States will fail to meet their Kyoto Protocol targets for limiting greenhouse gas emissions on the basis of the domestic policies and measures implemented or planned so far, according to new projections compiled by the European Environment Agency. The main reason is a runaway increase in emissions from transport, especially road transport.

However, the projections do not include any effects from several of the domestic policies and measures being developed under the European Commission-led European Climate Change Programme (ECCP). Among these is the EU emissions trading scheme due to start in 2005, a key initiative with the potential to deliver substantial additional emission cuts.

As reported by the EEA in May 2003, the EU has so far cut its overall emissions to 2.3 % below 1990 levels (up to 2001, the most recent year for which complete data are available). But the latest projections show that existing domestic policies and measures – concrete initiatives already being implemented at EU or national level – will reduce the EU's total emissions in 2010 to only 0.5 % below 1990 levels, leaving it 7.5 % short of the Kyoto target. Even this result assumes that Sweden and the United Kingdom will do better than required, although the use of their 'surpluses' to assist Member States with 'deficits' cannot be taken for granted. If these two countries did no more than meet their agreed targets, the EU reduction would be just 0.2 %.

On the basis of existing domestic policies and measures alone, all other Member States, including Germany, the EU's biggest emitter, would miss their Kyoto targets. Denmark, Spain, Ireland, Austria and Belgium would all exceed theirs by more than 20 %. The latest projections are much more pessimistic than last year's because Germany – producing around a quarter of total EU greenhouse gas emissions – is now forecasting a substantially smaller emissions reduction than previously.

The outlook is somewhat brighter when the additional domestic policies and measures being planned in 11 Member States, mainly in the energy sector, are brought into the picture. The additional initiatives – assuming they are implemented and have the effects anticipated - are projected to bring emission cuts of about 6.7 % on top of the 0.5 % reduction from existing policies and measures, giving an overall decrease of about 7.2 %.

Even with their additional domestic policies and measures, Austria,

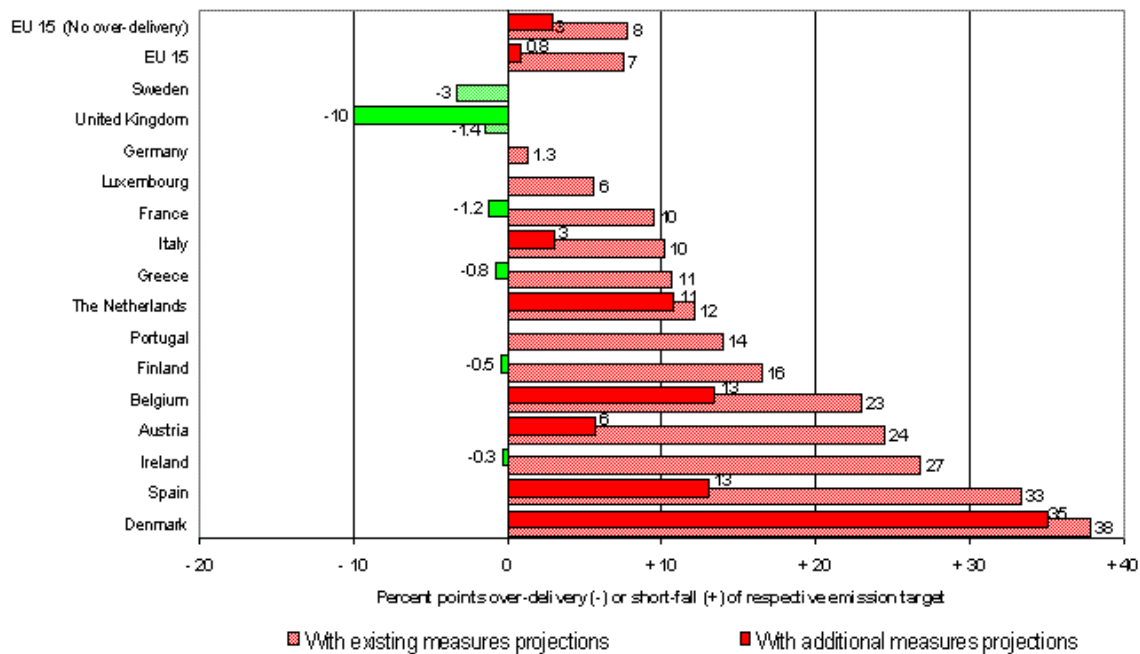
Belgium, Denmark, Italy, the Netherlands and Spain project that their emissions in 2010 will still be higher than allowed – by more than 10 % in the cases of Denmark, Belgium, Spain and the Netherlands. Germany, Luxembourg, Portugal and Sweden have yet to provide information on any additional measures.

The transport sector, responsible for just over one-fifth of the EU's greenhouse gases, poses by far the biggest challenge to the Kyoto targets, largely because of fast-growing emissions from road transport. On the basis of existing domestic policies and measures, total greenhouse gas emissions from transport are projected to be 34 % above 1990 levels in 2010. This does not include rapidly increasing emissions from international air travel, which is not

covered by Kyoto.

All other sectors are projected to reduce their emissions except the energy supply and use sector, where a 2 % increase from 1990 levels in 2010 is projected on the basis of existing policies and measures. However, this rise becomes a 6 % fall when the additional policies and measures planned are taken into account.

The EU's prospects for achieving its Kyoto target will not be affected by the arrival next May of 10 new Member States, several of which are projected to reduce emissions by much more than their own Kyoto targets require. The EU reduction commitment and the burden-sharing agreement cover only the 15 current members and the new countries' emissions will not be included in them.



**10. Slovenia Encourages Low-CO2 Cars**

The Slovenian cabinet decided on March 18 to waive vehicle purchase tax

on cars producing less than 110 grams of carbon dioxide (CO2) per kilometer, a first step in introducing incentives for low-pollution vehicles. Slovenian vehicle tax normally ranges from 1%-13% of purchase price. The new threshold is even lower than the EU's target of

average 120 g/km CO<sub>2</sub> from new vehicles by 2010. More than 600,000 vehicles meeting this target were sold in the EU-15 in 2002.

### **11. UK Greenhouse Gas Emissions Rise In 2003**

Britain's carbon dioxide emissions increased 1.5% in 2003, according to provisional official statistics just released. The government called the increase disappointing but expected. It claimed that the UK remained on a downward emissions trend, citing new policies and a 3.5% fall in emissions in 2002.

Nevertheless, the rise mirrors a widespread trend across Europe, with aggregate emissions up in both 2000 and 2001, the latest year for which figures are available. Expected over-achievement by Germany and the UK has been key to EU hopes of meeting its Kyoto protocol targets. German emissions also rose in 2003, according to initial estimates.

The rise in UK 2003 emissions was blamed on greater use of coal for electricity generation and a fall in net electricity imports. Total greenhouse gas emissions were 14% below their 1990 level in 2003, compared with the UK's Kyoto protocol target of minus 12.5%.

Statistics released alongside the greenhouse gas emission estimates show continued falls in many types of air pollutants to 2002, including all four substances covered by the EU's national emission ceilings directive. UK releases of volatile organic compounds and ammonia are now below the directive's 2010 target. Emissions of sulphur dioxide and nitrogen oxides are still well above target levels.

### **12. Swedish Council Urges New**

### **Green Measures**

Sweden's environmental objectives council has called for a range of new measures in pursuit of the government's goal of achieving sustainable development by 2020. In its first comprehensive evaluation of national environmental objectives set in 2001, the council identifies a need for more action in almost all fields.

Addressing its recommendations both to the government and EU partners, the council calls for environmentally differentiated vehicle taxes on heavy trucks and buses and for distance charging on goods transport. It recommends incentives for low-emission mobile machinery. The council also urges introduction of differentiated shipping lane charges based on vessels' sulphur and nitrogen oxide emissions.

### **13. Germany Proposes Tax Break For Diesel PM Filters**

The German Environment Ministry has proposed a program under which owners of diesel-fueled vehicles with particle filters would get tax breaks. The program would offer an annual deduction from the vehicle tax for cars that demonstrate particle emissions below a certain threshold, initially proposed at 2.5 milligrams or less per kilometer.

Under the ministry proposal, the owner of a car that meets the standard could deduct up to a total of [Euros] 600 (\$738) in vehicle taxes over the life of an automobile. Currently, German car owners pay an annual vehicle tax based on engine capacity and fuel type.

The Environment Ministry said it had sent the proposal for comments to other relevant departments of the national government, Germany's 16 state

governments, and European Union authorities.

The ministry hopes to have the tax break in place "as soon as possible" and would like for it to be available until 2009 or 2010, according to the ministry's statement on the proposal.

In an April 1 statement, Environment Minister Juergen Trittin said the tax is necessary because of cancer risks associated with the particles in diesel exhaust, and because the percentage of diesel-powered vehicles is climbing rapidly. A June 7, 2003, study commissioned by the German Federal Environment Agency estimated that 10,000 to 19,000 Germans die each year from diesel particle emissions.

In January 1990, diesel cars accounted for 13 percent all German cars; in January 2004, the number had risen to 18 percent. The ministry said it expects the share of diesel-powered automobiles to continue climbing because in January, they accounted for 44 percent of new registrations.

#### **14. Schroeder Questions EU Climate Policies**

European Union heads of state reaffirmed their commitment to meet greenhouse gas emissions reduction targets at a summit on economic competitiveness in March; however, at the same conference German Chancellor Gerhard Schroeder said EU plans to comply with the Kyoto Protocol even if the treaty does not enter into force would unfairly disadvantage European businesses. Schroeder echoed concerns raised by other EU officials in recent months and by Europe's leading industry associations for energy suppliers and consumers in a joint statement issued on the eve of the summit.

Nevertheless, at the conclusion of the summit, EU leaders issued a statement saying they "reaffirm the EU's commitment to delivering on the Kyoto Protocol target." They said that given the underlining importance of the treaty, the EU "urges countries that have not yet ratified, including the Russian Federation, to do so in a timely manner." The statement added, however, that the European Commission should "prepare a cost-benefit analysis that takes account both of environmental and competitiveness considerations."

#### **15. French Agency Says Toyota Prius Most Eco-Friendly**

France's top environmental think tank March 31 said a gasoline and electricity-powered hybrid automobile produced by Japan's Toyota Motor Corp. is the most environmentally sound vehicle on the road. The French Agency for the Environment and Energy Management (ADEME) put the Toyota Prius atop its annual survey of fuel consumption and carbon dioxide emissions for vehicles sold in France, noting that its gas mileage and emissions performance was an example that European automakers should follow. The Prius emits just 104 grams of CO<sub>2</sub> per kilometer, well below the voluntary ceiling of 140 g/km of CO<sub>2</sub> that European Union automakers have agreed to strive for by 2008. The annual survey is required under EU Directive 1999/94/EC, which mandates availability of consumer information on fuel economy and CO<sub>2</sub> emissions for all new passenger cars.

#### **16. EU Parliament Approves Legislation On Air Pollution, Batteries**

In a pre-election rush to clear

outstanding legislative business, the European Parliament has approved a batch of EU laws on heavy metals in air pollution, batteries and battery waste.

On air pollution, lawmakers approved a proposal from EU Environment Commissioner Margot Wallström that would require EU states to monitor ambient levels of arsenic, cadmium, mercury, and nickel, as well as polycyclic aromatic hydrocarbons (PAHs), which are carcinogens mostly produced by incomplete combustion of hydrocarbons. The directive is the fourth and final measure in an EU clean air legislative program agreed in the EU Ambient Air Quality Assessment and Management Directive (96/62/EC). Three measures already in force cover sulfur dioxide, nitrogen oxides, particulates, and lead (Directive 1999/30/EC); benzene and carbon monoxide (Directive 2000/69/EC); and ozone (Directive 2002/3/EC).

Unlike the three earlier measures, the directive on heavy metals and PAHs will not set mandatory limits. Wallström proposed that the measure should be limited to determining common methods and criteria for the assessment of concentrations in ambient air to provide data for follow-up legislation. Initially, the Parliament demanded the new directive should also set binding limits. But after negotiations behind the scenes with EU ministers, who must also approve the proposal, lawmakers settled for a compromise that requires states to aim for nonbinding "target" levels to be met "where possible" by 2012. The idea of mandatory limits will be reviewed in 2010. The "target values" will be the same as those proposed by Wallström at which ongoing monitoring will be mandatory: 6 nanograms of arsenic per cubic meter of air; 5 ng/m<sup>3</sup> of cadmium; 20 ng/m<sup>3</sup> of nickel, and 1 ng/m<sup>3</sup> of the PAH benzo a pyrene (BaP).

Ministers are now free to sign the draft into law in the coming weeks.

On batteries, lawmakers approved EU-wide targets for recycling of batteries and accumulators in legislation that replaces three directives adopted in the 1990s on materials used in batteries and safe disposal of battery waste (Directives 91/157/EEC; 91/101/EC, and 93/86/EEC).

Due to the number of amendments introduced by the Parliament, the legislation will not be enacted before elections in June. Under EU procedures, the incoming Parliament can opt to "take over" the draft as amended on April 20.

The Parliament wants to set a mandatory collection rate of 50 percent of the national annual sales of portable batteries instead of a figure of 160 grams per inhabitant per year, as proposed by Wallström. In practice, the Commissioner's target figures would equate to a collection rate of 40 percent. The Parliament also wants to limit the use of cadmium, lead, and mercury in batteries. A report from the Parliament's Environment Committee in February urged that cadmium be banned from use in batteries. Amendments call for governments to prohibit sales of all batteries or accumulators containing more than 5 parts per million (ppm) of mercury by weight, 40 ppm of lead, and/or 20 ppm of cadmium. Exemptions would apply when no substitutes are suitable.

Each year, approximately 800,000 metric tons (mt) of vehicle batteries, 190,000 mt of industrial batteries, and 160,000 mt of portable batteries are sold throughout Europe, according to Commission estimates.

### 17. Scania Reaches Euro IV Truck Standards Without Aftertreatment

Sweden's Scania has unveiled a new R-series range of long-haulage trucks. From September 2004--in addition to the full range of Euro III engines--the trucks will be offered with a 420 hp diesel engine compliant with the Euro IV emission standards. The new engine meets Euro IV standards using advanced diesel engine technologies, without the use of exhaust gas aftertreatment.

Scania plans to introduce the 12-litre Euro 4 engine featuring emission reductions of NOx by 30 percent and by 80 percent of particulates. The output of 420 hp makes the engine suitable e.g. for long-haulage operation and enables customers to choose a truck with superior environmental performance and thus benefit from lower road fees or taxes in some countries.

Scania has succeeded in reducing emissions at source, that is, in the combustion chamber itself, without any aftertreatment. Scania's first Euro 4 engine uses several techniques that they have developed in recent years. The engine is based on its 12-litre platform and uses its own engine management, fuel injection, and turbocompound and EGR systems.

Tests show essentially unchanged fuel consumption compared to the equivalent Euro 3 engine."

The electrical system in the new truck range is based on CAN bus technology. All control units work together in a shared network. This provides potential to control the vehicle's computer systems optimally.

Ever since the launch of the 470 hp turbocompound engine and the new

high-pressure injection system Scania HPI in 2001, Scania has gradually introduced its own engine management systems. This permits very precise control of the engine and easy adaptation to create new engine variants. Scania HPI allows high injection pressures, which in turn leads to lower particulate emissions. Co-ordination with other systems in the truck such as the Scania Opticruise automated gear changing system can also be done with much greater precision.

The EGR system (exhaust gas recirculation) is another in-house design. Recirculated exhaust gases are cooled by the engine's cooling system before being fed to the intake manifold. With EGR in the intake air, combustion becomes cooler, reducing the formation of nitrogen oxides in the exhaust gases. Turbocompounding is used to feed back the right quantity of exhaust gases into the engine.

With EGR, Scania attacks emissions at source – in the combustion chamber. No additives are needed and the vehicle can operate on the diesel fuel available at any pump.

Scania will introduce Euro 4 engines later in all output segments and for all applications. Inline engines will have EGR. They will also use selective catalytic reduction (SCR) on some engines.

Scania said they are eager to offer customers a variety of choices. EGR-equipped trucks can be driven and refuelled anywhere. In trucks with SCR, the NOxCare urea solution must be topped up at each fuel stop, which at least initially will limit their operating range, since the NOxCare infrastructure is not yet fully established.

## NORTH AMERICA

### **18. ARB Requires Lower Emissions from In-Use Big-Rig Trucks**

The California Air Resources Board (ARB) approved a plan to accelerate upgrades of emission control software that reduce excess smog and particulate-forming nitrogen oxide (NOx) emissions from most heavy-duty diesel trucks, buses and recreational vehicles (RVs) built between 1993 and 1999. The unique rulemaking stems from a 1998 legal settlement between the ARB, the U.S. Environmental Protection Agency (USEPA) and the nation's six biggest diesel manufacturers: Caterpillar, Cummins, Detroit Diesel, Mack/Renault, Navistar and Volvo. ARB and USEPA showed that those manufacturers used defeat devices, software that caused high emissions under certain modes of operation. One provision of the settlement required engine manufacturers to develop low emission software that could be installed to reduce the emissions of these trucks.

The ARB's new plan will result in low emission software installed much sooner than is occurring under the legal settlement. Engine manufacturers agree to pay for the software and its installation any time a truck visits a dealership. The goal of the voluntary plan is to increase the percentage of California vehicles using low emission software from the current level of 10 percent to 35 percent by November 2004, 60 percent by June 2005, 80 percent by February 2006 and 100 percent by 2008. If those targets are not met, the ARB will implement a regulation requiring the upgrades.

As part of the 1998 settlement, manufacturers agreed to upgrade the computer software when vehicles were brought into repair shops for rebuilding,

presumably between 300,000 and 400,000 miles. Many of those vehicles have now been operating for more than 700,000 miles without rebuilding and therefore are exposing the public to many times their intended pollution output.

According to ARB data, more than 60,000 heavy-duty vehicles still operating with defeat devices are licensed in California, with another 300,000 to 400,000 vehicles from other states operating part-time in California each year. Those data also show that less than 10 percent of all eligible vehicles have been upgraded since 1998. Combined, those vehicles emit more than 30 tons of excess NOx daily, the pollution equivalent of over one million cars.

### **19. MMT Issue Coming To A Head in Canada**

The decision of two Canadian oil companies to suspend the use of MMT next month may dramatically reduce the number of new cars affected by the additive, complicating liability issues and limiting key data needed by the Canadian government to make a decision on whether to ban the product. The decision by the two oil companies, Shell and Imperial, comes as Environment Canada is poised to name an expert panel to make a determination on the alleged effects of MMT on air quality and automotive catalytic converters. The Canadian government will use the findings of the expert panel to determine the proper course of action, which could include an outright ban of the gasoline octane enhancer. Comments on the formation of the panel were submitted earlier this month.

The comments provide a preview of the strategies the two sides will likely follow. Automakers will seek to prove that

manganese clogs the ceramic substrate used in catalytic converters, causing them to fail and leading to severe degradation of vehicle performance. The automakers claim the clogging is much more acute in a new emissions-control technology introduced to meet strict Tier 2 emissions regulations, which took effect Jan. 1. The new technology uses a ceramic substrate that has a much denser cell structure, 600, 900 and even 1,200 cells per square inch, compared to the 400 cells per square inch material used in meeting Tier 1 vehicle regulations.

MMT producer Ethyl Corp. will seek to demonstrate there are any numbers of failure modes for catalytic converters that do not correlate with the use of MMT. The company will also likely seek to differentiate catalytic emission control systems failures between manufacturers and even between vehicle models. In its comments to Environment Canada on the expert panel Ethyl suggests as germane questions:

- “Does the use of MMT cause vehicles to fail applicable emissions standards consistently for all vehicles?”
- “Does the use of MMT cause vehicles to fail applicable emissions standards consistently for one or more subsets of vehicles?”

In making its case, Ethyl Corp. will compare catalytic converter failure rates in the U.S. where there is practically no MMT used in gasoline (the little that is used is largely limited to Colorado, Utah, New Mexico and Arizona) to failure rates in Canada where as much as 90 percent of gasoline is blended with MMT.

## **20. EPA Supports Trucker**

### **Economic Incentives To Ease Diesel Rules' Impact**

EPA air chief Jeffrey Holmstead told a trucking industry conference that the agency would offer technical assistance on developing a legislative proposal on tax incentives to Rep. Mac Collins (R-GA), who has called for such incentives. But environmentalists and state and local air officials oppose the incentives, saying it would be unprecedented to give tax breaks for simply complying with the law and would prompt other industries to seek similar concessions.

Bill Becker of the State & Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials said such a request “suggests that timely compliance cannot be achieved without financial incentives” and sets up yet another way to delay the rule. “What if Congress is unable or unwilling to give you the tax incentives that you want? Then do you call for delay or weakening?” he asked the conference.

But Holmstead appeared to dismiss those arguments. “I don’t have a philosophical disagreement with your views,” he told the conference. However, Holmstead suggested that the agency cannot write tax-related legislation and it would ultimately be up to Congress to adopt the incentives. In addition to the tax incentives discussion, Holmstead said EPA will seek to address truckers’ concerns about pre-testing new engines and fuel standards by soon announcing a “Clean Corridors” program to be launched in 2005. The program will allow trucking companies to conduct on-the-road tests of engine prototypes using ultra-low sulfur diesel fuel.

EPA’s comments come after a General Accounting Office (GAO) report Collins



requested urged the agency to cooperate with truckers to avoid a pre-buy of engines built just before new standards take effect in 2007.<sup>1</sup> GAO's John Stephenson told the conference that not only should EPA convene another independent review panel to explore easing the rules' impacts on truckers -- which EPA opposes -- but that the agency should press for tax incentive legislation.

Environmentalists have blasted GAO's report, accusing the independent investigative arm of Congress of being too heavily influenced by Collins and other trucking industry congressional allies.

Collins, a former trucking company owner who is campaigning for the Senate, harshly criticized Holmstead in front of the conference for failing to help the industry so far.

### **21. Court Denies Truckers' Petition Seeking New EPA Diesel Standards**

On Friday, April 9, 2004, the U.S. Circuit Court of Appeals for the District of Columbia ruled that the U.S. EPA was legally entitled to deny a petition from five trucking companies who had urged the agency to rework its emission standards for heavy-duty diesel engines used in trucks and buses. The court dismissed the trucking companies' claims, ruling that the plaintiffs lacked constitutional standing to bring the case. The court said the firms offered "only assertions, not facts" to support their claim that the repeal of the emission standards would reduce their costs. The companies – Crete Carrier Corp.,

Schneider National Inc., Swift Transportation Company Inc., U.S. Xpress Enterprises, and Werner Enterprises – argued that EPA mistakenly failed to consider new cost and energy data showing a dramatic increase in the purchase price of the new engines.

The trucking companies asked EPA in 2002 to reconsider the 2004-06 standards based on data provided by engine manufacturers as part of an October 1998 consent decrees involving seven major manufacturers of diesel engines. Federal and state regulators found the engine companies to have installed approximately 1.3 million engines with illegal emission-control systems. The consent decree required the engine manufacturers to meet the 2004 emission standards by October 2002 or face substantial noncompliance penalties. In February 2003, EPA denied the trucking companies' request to rework the standard, explaining that their claims were based on an inappropriate interpretation.

### **22. U.S. Defense Report Warns of 'Dire' Effects Of Climate Change**

A report prepared for the U.S. Defense Department and distributed in late February warns of possible "dire consequences" of abrupt climate change. The report warns that abrupt changes which could strike as early as 2007 could cause the ocean to break through levees in the Netherlands making key coastal cities such as The Hague uninhabitable, or to breach levees in central California, creating "an inland sea and [disrupting] the aqueduct system transporting water from northern to southern California because salt water can no longer be kept out of the area during the dry season."

The report urges that the U.S. approach

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1. "Air Pollution: EPA Could Take Additional Steps to Help Maximize the Benefits from the 2007 Diesel Emissions Standards"

to climate change policy be elevated from "a scientific debate to a U.S. national security concern."

The report for the Defense Department states that while the scenarios it describes may not be "the most likely," they are "plausible, and would challenge United States national security in ways that should be considered immediately."

The unclassified report, *An Abrupt Climate Change Scenario and Its Implications for United States National Security*, was commissioned by Andrew Marshall, the founding director of the Defense Department's Office of Net Assessment, a think tank within the Pentagon. It was prepared by Peter Schwartz and Doug Randall of the Global Business Network, a California-based consulting firm. Schwartz previously headed planning for Royal Dutch/Shell in London and Randall is a former senior research fellow at the Wharton School.

In preparing the report, the authors said they conducted interviews with "leading climate change scientists, conducted additional research, and reviewed several iterations of the scenario with these experts."

Marshall said the Defense Department's interest in the subject was provoked by the findings in a National Academy of Sciences' committee report, *Abrupt Climate Change: Inevitable Surprises*, released in 2002, which concluded that greenhouse gas emissions increase the possibility of significant, abrupt, and unwelcome climate change effects. Following from that report, the Defense Department's assessment office sought to determine how sudden climate can strike, which countries would likely be affected, and how severe these impacts would be, according to Marshall.

According to the Defense Department

report, global warming may progress only gradually, but "there is a possibility that this gradual global warming could lead to a relatively abrupt slowing of the ocean's thermohaline conveyor, which could lead to harsher winter weather conditions, sharply reduced soil moisture, and more intense winds in certain regions that currently provide a significant fraction of the world's food production. With inadequate preparation, the result could be a significant drop in the human carrying capacity of the Earth's environment."

Regional climate changes could include an annual average decrease in temperatures up to 5 degrees Fahrenheit over Asia and North America and 6 degrees Fahrenheit in northern Europe, which is more dependent on the warming effect of the Gulf Stream than North America, and persistent droughts in critical agricultural regions and in the water resource regions for major population centers in Europe and eastern North America.

Other possible effects include accelerated melting along the Himalayan glaciers, "causing some Tibetan people to relocate;" and "floating ice in the northern polar seas, which had already lost 40 percent of its mass from 1970 to 2003, is mostly gone during summer by 2010." As glacial ice melts, the report predicts changes in sea levels, which leads to ocean waves increasing in intensity, threatening coastal cities.

The report predicts "millions of people are put at risk of flooding around the globe (roughly 4 times 2003 levels), and fisheries are disrupted as water temperature changes cause fish to migrate to new locations and habitats, increasing tensions over fishing rights."

Such climate changes could "potentially destabilize the geopolitical environment,

leading to skirmishes, battles, and even war due to resource constraints" in food and fresh water shortages, the report said.

### **23. Bush's FY 2005 Budget Cuts DOE's Diesel Research**

President Bush's 2005 budget proposal includes a number of significant cuts to the US Department of Energy's (DOE) diesel engine and emission R&D programs. These include:

- The 21st Century Truck program would be cut from \$78 to \$56 million
- Advanced Combustion Engine R&D would be reduced from \$54 to \$35.9 million.
- Funds to be totally eliminated include:
  - \* The clean-diesel light-truck R&D with Cummins
  - \* Cooperative R&D on urea-SCR with Ford
  - \* Funding for the West Virginia University mobile emission laboratory
  - \* Off-highway R&D funds

### **24. AQMD Launches Major Study of Toxic Air Pollution in Southland**

The South Coast Air Quality Management District (AQMD) has started an intensive one-year study to assess current levels of cancer-causing toxic air pollutants and the risk they pose to Southland residents.

"Since our last toxic air pollution study six years ago, we have reduced cancer-causing emissions through numerous regulations," said Barry Wallerstein, executive officer of the South Coast Air Quality Management District. "This study will help us gauge the

effectiveness of our current regulations and serve as a vital tool in helping shape future air quality and environmental justice policies."

The goal of MATES III is to update toxic air pollution levels and toxic emission inventories, and then input those data into a computer model of air dispersion to determine the cancer, as well as non-cancer, health risk from air toxics across the Southland. The study also will investigate potential toxic "hot spots" in communities.

MATES III will monitor for 21 toxic air contaminants and four other substances at 10 sites across the Los Angeles Basin. In addition, AQMD will use moveable monitoring stations to sample at a dozen or more neighborhood sites near toxic emission sources or in areas where community members are concerned about health risks from air pollution. Such neighborhood sites could be near airports, railroads, warehouses, landfills, high-volume vehicle traffic or multiple commercial or industrial facilities. Sampling at each neighborhood site will last for up to two months.

During MATES III, AQMD will double the monitoring frequency of the previous study from one-in-six days to one-in-three.

AQMD scientists have convened a technical advisory group, including representatives of other environmental agencies, universities, industry and environmental groups. The committee will help guide the study from start to finish and will assist in selecting the specific neighborhood monitoring sites.

Monitoring will continue through early 2005. The study is expected to be finished during summer 2005.

Since the completion of MATES II,

AQMD's Governing Board has placed a high priority on reducing toxic air pollution and resulting health risk. In 2000 and 2001, the Board adopted a series of clean fleet rules to reduce diesel exhaust from transit buses, trash trucks, street sweepers, airport taxis, school buses and other fleets. AQMD's Board also has approved more than \$100 million in local and state funding to help replace aging, dirty diesel engines in school buses, marine vessels and other vehicles with lower-emission diesel and alternative fuel models.

MATES II, the nation's most comprehensive study of toxic air pollution to date, found that:

- Diesel exhaust is responsible for about 70 percent of the total cancer risk from air pollution;
- Emissions from mobile sources - including cars and trucks as well as ships, trains and planes - account for about 90 percent of the cancer risk. Emissions from businesses and industry are responsible for the remaining 10 percent; and
- The highest cancer risk occurs in south Los Angeles County -- including the port area-- and along major freeways.

**Toxic Air Contaminants to be Monitored in MATES III**

- 1,3-Butadiene
- Acetaldehyde
- Arsenic
- Benzene
- Beryllium
- Cadmium
- Carbon Tetrachloride
- Chloroform
- Elemental Carbon
- Formaldehyde
- Hexavalent Chromium
- Lead
- Manganese
- Methylene Chloride

- Naphthalene
- Nickel
- Perchloroethylene
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Propylene Dichloride
- Trichloroethylene
- Vinyl Chloride

**Other Substances to be Monitored**

- PM10
- PM2.5
- Organic Carbon
- Total Carbon

**25. AQMD Board Adopts Initiatives For Clean School Buses, Cancer Research**

The Southland's air quality agency adopted two new air quality initiatives, committing \$12 million to replace and retrofit diesel buses, and \$1.5 million for research into possible links between air pollution and cancer. William Burke, chairman of the South Coast Air Quality Management District's Governing Board, proposed the programs last month at the start of his fourth term as chairman of the AQMD.

The school bus initiative will provide funding to help purchase natural gas-powered buses as well as particulate traps for installation on diesel-powered buses. Specifically, the initiative will provide:

- A total of \$7.2 million and up to \$60,000 per CNG bus purchased, resulting in the replacement of about 120 diesel buses. Public schools and private companies will be eligible for the funding, with public schools receiving first priority. Public schools can receive an additional \$12,000 per bus for natural gas fueling infrastructure. Buses eligible for replacement must be 1986 and older models,

with 1976 and older models given priority. Replaced diesel buses must be completely destroyed by crushing; and

- A total of \$4.8 million -- \$6,500 per diesel bus -- for installation of retrofit particulate traps capable of reducing particulate matter by more than 85 percent. The traps are effective only on 1994 and newer model buses. Both public and private fleets are eligible, and most 1994 and newer public school buses already have been retrofitted with the traps. The funding, which also includes \$500 per fleet for the initial incremental cost of low-sulfur diesel fuel, is expected to place more than 650 particulate traps on buses.

Since 1999, AQMD has approved more than \$43 million in state and local funding to replace 287 older school buses with 201 compressed natural gas-powered models and 86 lower-emitting diesel buses. In addition, the funds have provided particulate traps for 1,295 diesel buses. State funding to assist in the purchase of clean-fueled buses is due to end this year.

Funding for the \$12 million school bus initiative will come from AQMD's Rule 1309.1 Priority Reserve Fund, which is used to provide emission credits for certain sources.

The second initiative would expand the activities of the Brain Tumor & Air Pollution Foundation, which was proposed by Burke and approved by the Board last year. The foundation, chaired by AQMD Board Member and Los Angeles County Supervisor Mike Antonovich, has contracted with brain surgeon Dr. Keith Black of Cedars-Sinai Medical Center to look into air pollution as one possible cause of brain tumors.

The new initiative would expand its efforts to address air pollution and lung cancer. Funding of \$1.5 million will come from the RECLAIM Air Quality Investment Program.

## **26. More Alternative Fuel Vehicles Seen in US in 2004**

The number of vehicles in the United States that run on alternative fuels is expected to increase 7.3 percent this year from 2003 according to the U.S. Energy Information Administration. A total of 547,904 vehicles that run on natural gas, corn-based ethanol, electricity or liquefied petroleum gases will be on the road this year, up from 510,805 last year, they estimated. That's slower growth than the 8.4 increase from the 471,098 alternative-fueled vehicles in use from 2002 to 2003, said the Energy Department's analytical arm.

The five states that had the most alternative-fueled vehicles last year were California (77,761), Texas (55,820), New York (37,559), Oklahoma (23,336) and Georgia (17,912). At the bottom of the list were Maine (417), Vermont (844), Rhode Island (936), West Virginia (1,098) and New Hampshire (1,218), EIA said.

The agency's numbers do not include hybrid vehicles that are fueled by a combination of electricity and traditional gasoline.

The Bush administration wants to provide more than \$1 billion for research to develop cars and trucks that run on pollution-free hydrogen. The White House hopes the vehicles can be readily available to consumers at an affordable price near the year 2020.

## **27. Canadian Minister Threatens Mandatory Fuel Efficiency Standards**

The Canadian government will implement mandatory automobile fuel efficiency standards based on those in the United States if Canadian automakers continue to stall negotiations on tougher voluntary fuel efficiency standards, Environment Minister David Anderson said March 18. The government will continue to negotiate with the automobile manufacturers on tougher voluntary standards, but is running out of time if Canada is to meet its Kyoto Protocol commitments according to Anderson.

If Canada follows the U.S. model, it would issue CAFE (corporate average fuel economy) standards requiring auto manufacturers to meet certain targets for average fuel efficiency for all automobiles they sell.

The federal government has been negotiating with the automakers, along with other major industries, since December 2002 on how best to meet the Kyoto commitment. The government has asked automobile manufacturers to contribute to the Kyoto effort by improving the average fuel efficiency of Canadian vehicles by 25 percent by 2010.

Anderson also indicated that Ottawa planned to work with individual U.S. states such as California and New York to put pressure on manufacturers.

## **28. Ford To Use Toyota Hybrid System Technology**

Toyota Motor Corp said yesterday that Ford Motor Co would use some of its hybrid engine technology, in a pact that underlines the Japanese auto giant's strong lead in eco-friendly gasoline-electric know-how. Toyota, which

recently overtook Ford to become the world's second-largest auto maker, is keen to see the overall market for hybrids grow while promoting its technology and expanding its hybrid lineup. It has said it might supply hybrids to other auto makers as part of its goal to produce 300,000 of the eco-friendly vehicles a year by the middle of the decade.

Under the agreement, Toyota's patents on gasoline-electric hybrid engine system control and emission purification have been licensed for use in Ford's own hybrid system, which is under development.

Toyota made its name as world leader in hybrid technology in 1997 when it launched the Prius sedan, the first mass-produced vehicle to combine a battery-powered motor and a gasoline engine, significantly reducing emissions.

The auto giant went on to sign a much broader hybrid system licensing agreement with domestic rival Nissan Motor Co in 2002.

Honda Motor Co is the only other auto maker to mass-market hybrid vehicles, and Ford is the only U.S. auto maker with plans to launch a true hybrid this year - the Escape sports utility vehicle.

Ford said its hybrid system would feature more than 100 unique patents.

Purists have long questioned the U.S. auto maker's hybrid engine prowess after Ford reached an agreement in 2001 with Aisin AW, a Toyota-affiliated car parts maker, to supply Ford with key components for the Escape hybrid, which was first planned for 2003.

Toyota plans to roll out at least two new gasoline-engine hybrids in the U.S. market this year, including the world's first luxury hybrid, the RX400h sports

utility vehicle. It is also considering a hybrid version of a new pickup truck. Toyota has sold more than 200,000 hybrid vehicles to date and says its hybrids are profitable. Honda says it barely makes a profit while Ford concedes the Escape will sell at a loss.

U.S. automakers, notably General Motors Corp, have been vocal in questioning the merits of hybrid cars. They have worked more aggressively to advance zero-emission hydrogen fuel cell vehicles, which are widely believed to be at least 10 to 15 years away from being commercially viable.

### **29. Connecticut Legislature Adopts California Standards**

The Clean Cars Bill adopts the "California Emissions Standards" for new cars and trucks sold in Connecticut beginning with the 2008 model year. These standards have already been adopted in Massachusetts, New York, Vermont and most recently, New Jersey. Cars and trucks are the single largest source of toxic and smog-forming air pollution in Connecticut.

In Connecticut, estimates are that the program will reduce toxic air emissions 33% and the two major components of smog would be reduced by 21% and 11%. These reductions in pollution are achieved by requiring automakers to sell increasing numbers of hybrid-electric and other advanced-technology, low-emission cars and trucks in Connecticut beginning with the 2008 model year.

### **30. Canadian Government To Set Rules for Green Purchasing**

Canada's federal government will promote sustainable development in Canada's major urban centers, Public Works and Government Services

Minister Stephen Owen said April 2. As the country's largest land owner and landlord, Public Works and Government Services Canada will add conditions related to environmental improvements and sustainability to the leases it negotiates, and will impose similar conditions on the construction of new buildings, Owen told participants in the closing plenary of the Globe 2004 conference. Also, as purchaser of the government's vehicle fleet, the department will focus on purchasing low-emission vehicles, starting with its own fleet and then expanding to other departments and agencies.

The department's C\$13 billion (\$9.9 billion) in annual purchases of goods and services on the federal government's behalf also gives it a major opportunity to promote "green" procurement standards, he said. "We've got these levers and we are using them, and we'll use them more and more," he said.

There will also be a "cascading" effort to other levels of government, as his department will offer access to its procurement services to provincial and municipal governments to give them greater purchasing power while promoting more environmentally friendly buying practices, he said.

### **31. Supreme Court Strikes Down Local Diesel Vehicle Ban**

The U.S. Supreme Court has ruled that a federal clean air law bars local regulations for the Los Angeles region that prohibit the purchase by fleet operators of new diesel-fueled vehicles. The 8-1 decision was a victory for two industry groups that argued the regulations were preempted by a section of the federal clean air law that bars any local standard for the control of emissions from new motor vehicles.

The South Coast Air Quality Management District, a local air-quality district for the Los Angeles region, adopted the regulations in 2000. They prohibit operators of a fleet of 15 or more vehicles from purchasing new diesel-fueled vehicles. The rules apply to operators of public and private fleets, including transit buses, airport shuttles, limousines, taxis, street-sweepers and waste haulers. The rules require purchases of vehicles with low emissions or that use alternative fuels. The regulations applied to Los Angeles, Orange, Riverside and San Bernardino counties, a region long known for smog and other major air-quality problems.

A U.S. appeals court in California ruled the anti-pollution regulations were not preempted because they did not impose emission standards. The high court in an opinion by Justice Antonin Scalia voided that ruling and sent it back to the lower courts.

The Engine Manufacturers Association and the Western States Petroleum Association had challenged the regulations. They were supported before the high court by the Chamber of Commerce business group, auto and truck manufacturers, the American Trucking Association and the U.S. Justice Department. The two industry groups warned local governments across the country could impose differing emissions standards on the purchase of new vehicles, undermining the uniform system that the U.S. Congress intended. Scalia, writing for the majority, agreed. He said if states or political subdivisions are permitted to enact rules like those limiting purchase of vehicles, it could "undo Congress's carefully calibrated regulatory scheme."

California and a group representing cities across the country supported the air quality district, which argued it simply

used the authority that Congress gave to state and local governments to implement national air standards.

Justice David Souter dissented.

### **32. Bush Administration to Court: Cheney Papers Must Be Secret**

The Bush administration argued at the Supreme Court that records of Vice President Dick Cheney's energy task force should be kept secret to protect the president's ability to get discreet advice when preparing legislation. Cheney, who did not attend the hour-long arguments, is opposing a federal judge's order to produce documents about White House contacts with the energy industry in early 2001 amid charges of secretiveness over this and other issues.

"This is a case about the separation of powers," Solicitor General Theodore Olson said. He said disclosure of the records would intrude on the president's power to get opinions from subordinates in making legislative proposals to Congress.

Democrats in Congress have accused the Republican administration of lack of openness and accountability, pointing also to its reluctance to turn over some documents to the commission investigating the Sept. 11, 2001, attacks.

The Sierra Club environmental group and Judicial Watch, a watchdog group, sued to find out the names and positions of Cheney's task force members and to learn about their contacts with industry executives. They claimed Cheney, the former chief executive of energy and construction company Halliburton Co., drafted a policy that favored the industry at the expense of the environment by consulting business executives.



Justice Antonin Scalia, who refused to remove himself from the case even though he went on a duck-hunting trip with Cheney in January, seemed supportive of the government's argument. He repeatedly asked whether outside officials could be considered members of the task force, and thus covered under the federal open-government law at issue, when they did not vote on the various recommendations.

Several justices questioned the government's argument that the Supreme Court has jurisdiction over the dispute. "Why should we accept your position on jurisdiction?" Justice David Souter asked Olson. He said the case could go back to a federal judge for an order on what must be turned over, and that the government then could appeal.

Olson said appellate courts have jurisdiction over the case, just like the Supreme Court had jurisdiction in its 1974 historic ruling to require then-President Richard Nixon to turn over the Watergate tapes. Several justices asked Olson why the administration had not asserted executive privilege - a legal doctrine that can be invoked by the president to shield certain documents from disclosure. Olson replied that the objections in the Cheney case go to the entire process and executive privilege would not cover all of the issues. "Executive privilege may not cover every scrap of paper," he said.

Alan Morrison, representing the Sierra Club, argued the government does not have the right to withhold the documents.

Paul Orfanedes, representing Judicial Watch, cited five meetings between task force members and executives of Enron Corp., the Houston-based energy giant that collapsed into bankruptcy late in

2001. He said Cheney met with Ken Lay, then a top Enron executive. Justice John Paul Stevens replied, "What does that prove?" Stevens added, "Just because they talked to a lot of people doesn't prove anything to me."

A ruling in the case is due by the end of June.

### **33. Schwarzenegger Seeks to Boost Hydrogen-Fueled Cars**

California Gov. Arnold Schwarzenegger signed an executive order aimed at making California the leader in introducing environmentally friendly hydrogen-fueled cars in the years to come. Well known for his gas-guzzling Hummers, the former action film star drove a Toyota hydrogen SUV to refuel at a special station at the University of California Davis. He then signed an order about the fuel cells. "I will sign an executive order creating a public-private partnership creating hydrogen highways all over the state of California by the year 2010," he said.

"Hundreds of hydrogen fueling stations will be built. And these stations will be used by thousands of hydrogen-powered cars and trucks and buses. This starts a new era for clean California transportation."

Although industry experts say it will be at least a decade or longer before hydrogen cars could become common, backers said Schwarzenegger was helping to prod their gradual introduction.

California already has 22 hydrogen refueling stations; Schwarzenegger hopes there will soon be enough such stations across the state to encourage motorists to drive fuel cell cars.

President Bush has sought a 43 percent

increase in federal spending to develop fuel cell cars and related service stations. Last year, he launched a five-year, \$1.2 billion research initiative with the aim of reducing dependence on foreign oil and putting fuel cell cars on the road by 2020.

Automobile and energy companies have already invested billions of dollars in hydrogen powered cars. Yesterday, officials showed off about a dozen such vehicles, which looked like regular cars except for their internal machinery.

One Sacramento firm, Anuvu, is already selling fuel cell cars for about \$100,000 each and expects about a dozen orders this year, said company president Rex Hodge.

#### **34. EPA Says Nearly 1 in 5 US Counties Have Unhealthy Air**

Americans living in nearly one in five counties nationwide are breathing unhealthy air, according to new ozone rules unveiled by the Bush administration. The Environmental Protection Agency said that 474 of the nation's 2,700 counties in 31 states have unacceptable levels of ground-level ozone, a major ingredient in smog, up from 221 under the previous guidelines. About 159 million Americans live in counties that violate the new standards, the agency said.

Ozone is formed when fumes from automobiles, factories and other fossil fuels react with sunlight. It is linked to human respiratory problems including emphysema and bronchitis.

EPA Administrator Mike Leavitt said the agency notified governors of the 31 states about the violations, which require them to submit smog reduction plans in three years.

The agency set compliance deadlines based on the severity of the smog. Areas with marginal to moderate pollution have until 2007 to 2009, while highly polluted counties in California get more time. EPA gave smog-ridden Los Angeles and surrounding counties until June 2021 to comply.

The new ozone test stems from 1997 EPA rules delayed by numerous court challenges. The U.S. Supreme Court upheld the rules in early 2001. The new rules allow less ozone -- 85 parts per billion down from 120 parts per billion but averaged over a longer time frame -- and require more frequent tests.

Violating counties would have to spend more on pollution controls such as requiring cleaner-burning gasoline and power plants and more frequent automobile inspections.

The changes mean that about 100 metropolitan areas are in violation of the standards for the first time. They include San Francisco, Denver and many previously compliant suburban and rural areas, the EPA said. Large swaths of Southern California around Los Angeles and the Northeast corridor between Washington and New York have long been out of compliance.

Some 19 states pass the test, including large parts of the West around the Rocky Mountains along with Florida, Iowa, Minnesota, Mississippi and Vermont.

#### **35. Shell Canada Makes Low Sulphur Diesel Investment**

Shell Canada is investing \$400 million to bring ultra low sulphur diesel to the Canadian marketplace ahead of new federal regulations that take effect June 1, 2006. Preparatory work has started at Shell's Montreal East and Scotford (near

Edmonton) refineries to complete two new diesel hydrotreater units by early 2006. The units will allow Shell to reduce sulphur levels in diesel to 15 parts per million (ppm), down 95 per cent from current levels. In October 2003, Shell announced a 20-year agreement with Suncor by which Suncor will construct a hydrotreater at its Sarnia refinery to reduce sulphur in diesel for both companies.

Along with the new vehicle emission regulations, the Sulphur in Diesel Fuel Regulations will reduce nitrogen oxides and particulate matter emissions from diesel-powered vehicles by approximately 90 per cent from current 2004 model year vehicles.

The diesel hydrotreater projects will provide significant economic benefits for local communities in Quebec and Alberta. Approximately 1300 contract engineering and construction jobs will be created during the project's peak period and about 80 per cent of project costs will be incurred in Canada through engineering, materials, labor and engineered equipment. Shell's policy is to use local contractors whenever possible.

Shell Canada has selected recognized

global contractors to manage the projects. Fluor Canada Ltd. is responsible for overall project management, with the assistance of Colt Engineering at Scotford and BPR-Bechtel at Montreal East.

Shell was the first nation-wide refiner capable of producing low sulphur gasoline when it started up its gasoline hydrotreaters in late 2002, following an investment of \$150 million.

**36. EPA Issues Latest Fuel Economy Report**

US EPA: "Light-Duty Automotive Technology and Fuel Economy Trends: 1975 Through 2004". The average fuel economy for all model year 2004 light-duty vehicles is estimated to be 20.8 mpg (11.3 l/100 km). Average model year 2004 fuel economy is 24.6 mpg (9.6 l/100 km) for cars and 17.9 mpg (13.1 l/100 km) for light trucks (this category includes most SUVs and minivans).

This year's report finds that since the late 1990's fuel economy remains relatively unchanged. The changes since 1975 are illustrated below:

	1975	1987	2004
Fuel Economy (mpg)	13.1	22.1	20.8
Weight (lbs)	4060	3220	4066
Horsepower	137	118	208
0 to 60 mph (sec)	14.1	13.1	10.0
Percent Truck	19%	28%	48%

Model year 2004 vehicles are estimated to average 20.8 miles per gallon (mpg) according to EPA's annual fuel economy trends report. Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2004 provides data on the fuel economy and performance characteristics of light-duty vehicles

(cars, vans, sports utility vehicles (SUVs), and pickup trucks) for model years 1975 through 2004. Since 1997 fuel economy has been relatively constant, ranging from 20.6 to 20.9 mpg. Fleet-average fuel economy peaked in 1987 at 22.1 mpg, but has declined since then due to the

increasing popularity of less fuel-efficient light trucks, particularly SUVs. This year, cars are projected to account for 52 percent of vehicle sales and light trucks are projected to account for the remaining 48 percent. While fuel economy levels have been relatively unchanged recently, vehicle performance (e.g. power) has nonetheless increased as manufacturers continue to apply innovative technologies to more cars and light trucks. Moreover, refinements to catalytic converters, transmissions, fuel injection, and electronic controls have made today's cars cleaner and more durable than ever before. Recent technology developments, such as hybrid-electric vehicles, clean diesel technology and variable displacement engines hold promise for the near-term future.

### **37. Bipartisan Group To Unveil House Version Of McCain-Lieberman Bill**

Legislation establishing first-ever greenhouse gas emission reductions from major energy, transportation and manufacturing industries is set to be introduced in the House by a bipartisan coalition that includes several high-ranking Republicans, including the chairman of the appropriations subcommittee in charge of the U.S. EPA's budget.

Rep. Jim Walsh (R-N.Y.), head of the House VA-HUD Appropriations Subcommittee, is a cosponsor of the climate change bill along with 19 other House members. The new House legislation mirrors language debated last October on the Senate floor from Sens. John McCain (R-Ariz.) and Joe Lieberman (D-Conn.) that would gradually force U.S. industries to reduce their emissions of six primary greenhouse gases (GHGs) to 2000

levels by 2010.

A House version of the McCain-Lieberman legislation had not been offered previously.

Key House Republicans signing on to the bill include Science Committee Chairman Sherwood Boehlert (R-N.Y.), Ways and Means Committee members Amo Houghton (R-N.Y.) and Nancy Johnson (R-Conn.), and the Budget Committee's second-highest ranking GOP member, Christopher Shays (Conn.)

Democrats have brought onboard Caucus Chairman Robert Menendez (D-N.J.), Government Reform Committee ranking member Henry Waxman (D-Calif.) and Harold Ford (D-Tenn.), the runner-up in last year's contest with Rep. Nancy Pelosi (D-Calif.) for the House minority leader position. In all, the bill has 20 cosponsors.

McCain, chairman of the Senate Commerce Committee, has vowed to continue pushing his climate change bill until its enactment in much the same vein as he approached campaign finance reform. At a hearing earlier this month, McCain indicated he is open to changing the bill's language to attract more votes. Last fall, prior to the Senate floor debate, McCain and Lieberman eased up the legislation's effects on industry by removing a second-tier cap that would have brought GHGs to 1990 levels by 2016.

The McCain-Lieberman bill was ultimately rejected on a 43-55 vote. Ten Democrats and 45 Republicans joined together against the bill, while six Republicans, 36 Democrats and Vermont independent Sen. Jim Jeffords voted in support of the measure.

### **38. Environment Canada Urges**

### **United States To Reduce Mercury**

Canada urged the United States to be more aggressive in reducing mercury emissions from coal-fired power plants, arguing in comments submitted March 30 to the U.S. EPA that Canadians' environmental and personal health is at risk without more stringent standards. In an April 1 statement, Environment Canada said its comments were in response to two options proposed by the EPA. One would reduce mercury emissions by 30 percent from current levels by 2007, while the other envisages an initial 30 percent reduction by 2010 and a 70 percent reduction by 2018.

Environment Canada said its computer modeling indicates that some 10 percent of mercury deposited in Canada each year is from the United States and that this rises to 38 percent in the Great Lakes region. "Mercury also has a serious and disproportionate impact on Canada's Northern and Arctic communities," the department added. "As a result, mercury reductions in the United States are needed to help protect human health and the environment in Canada."

The department explained that it is working with provincial and territorial governments on a national standard that would curb Canadian mercury emissions from coal-fired plants by at least 60 percent and potentially as much as 90 percent by 2010.

Environment Canada recommended EPA consider a more stringent maximum achievable control technology (MACT) standard for mercury that would capture 60 percent to 90 percent of the mercury from coal burned or set a lower Phase I cap (for 2010) in the cap-and-trade option.

Environment Canada also said it is trying to work with other countries, including China, which it blamed for more than 20 percent of airborne mercury pollution in Canada.

On the related issue of nitrogen oxides and sulfur dioxide emissions, Environment Canada said it supported EPA's proposed Interstate Air Quality Rule to reduce interstate transport of fine particulate matter and ozone.

### **39. EPA Delays Mercury Utility Rule Until March 2005**

The US Environmental Protection Agency has delayed finalizing rules to reduce harmful mercury emissions from aging power plants until March 2005 to consider whether stricter rules are needed. The EPA faced a Dec. 15 legal deadline to finalize the rules, which -- as written -- would require utilities to reduce mercury emissions by 70 percent by 2018. Mercury contaminates water and seafood, and has been linked to neurological disorders in infants.

EPA Administrator Mike Leavitt said final rules will be delayed by four months because of "the complexity of the issue and the desire to assure that it's done in the proper and informed way." The agency also extended the public comment period.

The delay stems from an offer from the Natural Resources Defense Council, the environmental group that sued the EPA in 1997. That lawsuit spurred the EPA to draft its mercury proposal. The NRDC said it would permit a delay if the agency would rethink the proposal it originally released in late January.

The nation's 1,100 coal-burning power plants emit about 48 tons of mercury each year, the largest unregulated U.S. source.

The EPA had proposed two possible ways to reduce emissions -- a cap-and-trade system, and requiring utilities to install "maximum achievable control technology" at plants. Both options are still under consideration, Leavitt said.

#### **40. EPA May Act Soon on California, NY Gasoline Waivers**

The Environmental Protection Agency will decide "fairly soon" on whether to grant temporary waivers from cleaner-burning summer gasoline standards California and New York have requested, EPA assistant administrator Jeffrey Holmstead reportedly has said. The two states have asked the EPA for temporary exemptions from federal clean air rules, saying the tough requirements permit fewer refiners to make the fuel and so makes gasoline more expensive.

The EPA requires the two states to sell gasoline blended with ethanol or another additive that raises its oxygen content. Granting the waivers would allow additional gasoline supplies, including imports, into the California and New York markets, possibly leading to lower pump prices.

U.S. refiners must have summer-grade gasoline at their terminals by May 1; service stations have to switch over to the cleaner-burning fuel by June 1. With U.S. retail gasoline prices now at record highs, there are concerns that prices could climb further as the two big fuel-consuming states switch to the special grade for the summer. U.S. refiners have repeatedly blamed the soaring fuel prices in part on the dozens of gasoline grades required in different states and localities.

#### **41. EPA Fuel Standards Likely To Remain Issue In Gas Price Dispute**

EPA's low-sulfur gasoline standards are likely to remain an issue in contentious efforts by a key Democratic senator and EPA to help reduce record-high gasoline prices, despite the agency's well-publicized announcement last week that it would back off a controversial plan to ease the standards.

Sen. Jeff Bingaman (D-NM), the ranking Democrat on the Senate energy committee, said last week that he will continue to press EPA to consider how its implementation of the so-called Tier 2 rules may be contributing to higher gasoline prices after the agency, under pressure from oil refiners and environmentalists, backed away from a plan favored by Bingaman to ease Tier 2 rules.

Bingaman had originally endorsed temporarily relaxing Tier 2 rules in a March 24 letter to President Bush that outlined a number of steps the administration could take to immediately lower gas prices. "American consumers and American businesses need relief, and they need it now," Bingaman wrote. "I believe that there are specific steps that the Administration can take right now to relieve the current tightness in our fuels markets and to put our national fuels system on a better long-term footing."

The plan EPA considered would allow small gasoline importers to stay in compliance with EPA's low-sulfur gasoline rules for the rest of 2004 without purchasing additional sulfur "allotments," even if they imported large quantities of high-sulfur gasoline. EPA developed the allotment system to measure annual average compliance with the low-sulfur rules and reward companies that make a significant

capital investment to comply with EPA's rules.

Supporters of the plan believe that by allowing increased imports of inexpensive high-sulfur fuel, which are currently oversupplied on international gasoline markets, they may be able to lower gas prices. In exchange, the companies would be required to import enough low-sulfur gasoline in 2005 and 2006 to offset the higher-sulfur content of the fuel they bring in this year.

The plan drew strong opposition from oil refiners, who charge it would hurt refiners that have already invested billions of dollars to comply with EPA rules. Both refiners and environmentalists also say making more allotments available to independent importers would not actually reduce gasoline prices. Led by the American Petroleum Institute and the National Petrochemical and Refiners Association, industry representatives successfully urged EPA officials at an April 22 meeting to drop the plan.

A Bingaman source says the senator is not suggesting a waiver of the rules but allowing "importers who can't obtain allotments this year to carry a deficit to '05 and then repay [it]." However, other sources say one reason EPA dropped the plan was concern that the agency couldn't guarantee the small importers would continue to participate in the program long enough to repay the debt.

Bingaman says he will continue to ask EPA for data on the allotments. "As a next step, I will ask EPA to tell me, and the American public, how many allotments have been generated or earned to date . . . how many are available today . . . and how many EPA expects to come to market over the year," Bingaman said in a statement after EPA announced it was dropping consideration of the plan. "I will also ask

at what price these allotments are trading, and at what potential cost to American motorists."

"I hope that EPA monitors this market carefully, to ensure that decisions by refiners do not adversely impact U.S. gasoline markets, or wallets," Bingaman's statement continues.

#### **42. EPA Regions Launch West Coast Diesel Reduction Collaborative**

The administrators of U.S. EPA Regions IX and X are spearheading an initiative to provide short- and long-term funding to reduce diesel emissions on the West Coast through market-based programs, incentives and new technology implementation similar to the California air board's Carl Moyer program.

Government officials, including EPA Region IX Administrator Wayne Nasti and Region X Administrator John Iani, met last week in Seattle with officials from Canada and the states of Oregon and California to discuss implementing the initiative. The plan is to create additional incentives for early application of federal and state on-road and non-road diesel engine and fuel standards and increase participation in voluntary diesel mitigation programs, according to an EPA draft fact sheet. EPA plans to leverage up to \$10 million in both Fiscal Year (FY) 2004 and FY 2005 budgets to aid the initiative. "Our longer-term goal is to establish a fund (with a revolving component) up to \$100 million each year for five years starting in FY 06 through joint federal agency efforts in the president's FY 06 budget, state and local efforts in Congress, state and local taxes and bonds and/or innovative strategies that leverage foundation and private sector funds," according to the fact sheet. This coffer would be dubbed the West Coast Clean Diesel Fund, and possibly be announced in February

2005.

Among its first projects is the establishment of a "Clean Corridor" along I-5 in California, Washington and Oregon, in which low-sulfur diesel fuel would be required at service stations. Officials are considering a project to provide electrification at truck stops for re-powering to reduce engine idling. In addition, the federal officials may launch a Clean Marine Initiative by helping to incentivize cleaner fuels at ports and the retrofit of port equipment and vessels with cleaner engines.

Other federal agencies participating in the collaboration are the Department of Agriculture, Department of Transportation and Department of Energy.

EPA officials say they are attempting to attract support for the programs at the state and local levels, in part, because they cannot directly lobby Congress for funding for the initiative. The officials said the initiative would resemble a larger-scale version of the California Air Resources Board's Carl Moyer diesel emission-reduction program, which currently is seeking similar private/public funding to continue supporting engine retrofitting and replacement projects.

Officials plan to hold a larger meeting in June that would include private sector representatives.

## ASIA-PACIFIC REGION

### 43. TERI Report Calls For Low Sulfur Fuel and Diesel Filters

A major research organization in India has released a report calling for development of capacity to produce low sulfur diesel and mandatory particulate filters to cut emissions from heavy-duty vehicles. The report, Fuel Choices for

Transport and the Environment, by the New Delhi-based Tata Energy and Resources Institute (TERI), says that ultra low sulfur diesel (ULSD), with a maximum 50 parts per million (ppm) of sulfur, should be made available in India's most polluted cities, and that modern Indian refineries can easily upgrade to produce the fuel.

Currently, diesel with 500 ppm sulfur is available in four major cities in India--Delhi, Mumbai, Kolkatta, and Chennai; diesel sold in the rest of the country contains sulfur as high as 2,500 ppm. India has already implemented two phases of improvements in diesel quality, first cutting sulfur in diesel from 10,000 ppm to a maximum 2,500 ppm in 2000, and then to a maximum 500 ppm diesel in four major cities in 2001.

The report said focusing efforts on improving the quality of diesel fuel would be a more effective way to reduce vehicle emissions than trying to develop compressed natural gas as a fuel, since the latter approach would require substantial additional infrastructure. Conversely, ultra low sulfur diesel can be produced at domestic refineries and distributed through existing liquid fuel supply infrastructure with minimal new investments.

The report was conducted with funding from the Indian and United Kingdom governments.

### 44. Toyota Seen Selling Hybrid Camry in 2006

Toyota Motor Corp is likely to sell a hybrid version of its best-selling Camry from 2006, a Japanese newspaper has reported, a move that would shift hybrids from their niche position in the car market into the mainstream. The Nihon Keizai business daily said that Toyota was aiming to sell 100,000 eco-



friendly, gasoline-electric Camrys a year, mainly in North America. It sells over 400,000 Camrys annually in the United States, making it that market's most popular passenger car.

Such a plan would fit in with Toyota's goal of producing 300,000 hybrids annually by the middle of the decade. Analysts said that Toyota, Japan's largest auto maker, would probably be able to reduce costs by 2006 and sell a hybrid Camry at a price attractive to consumers. The auto giant plans to roll out at least two new gasoline-engine vehicles in the U.S. this year, including the world's first luxury hybrid, the RX400h sports utility vehicle. It is also considering a hybrid pick-up truck.

Honda Motor Co - the only other car firm currently selling hybrids - markets a hybrid version of its Civic sedan and plans an Accord hybrid in the U.S. market this autumn. But Honda's sales numbers are small and are expected to remain so for the time being.

#### **45. Guangzhou to Ban Motorcycles By 2007**

Southern China's industrial hub Guangzhou is taking steps to ban motorcycles in a bid to cut down on air pollution and ease traffic. According to Chinese media, motorcycles will be barred from major roads during peak periods starting May 1, and 24 hours a day starting Jan. 1, 2006. A city official was quoted as saying that the ban "will extend to every corner of the city by 2007." Police motorcycles, however, will be exempt from the restrictions.

Motorcycles account for about half of all registered vehicles in Guangzhou, and for nearly 20 percent of the city's carbon monoxide and hydrocarbon emissions, according to official statistics.

The city enacted a law in January 2003 that revoked licenses for motorcycles more than 10 years old. Like many Chinese cities, Guangzhou stopped issuing new motorcycle licenses for city streets several years ago.

Guangzhou residents remain heavily dependent on motorcycles, but city planners are hoping that a newly opened subway system will provide an alternative mode of transportation.

Ironically, Guangdong Province, of which Guangzhou is the capital city, is China's top producer of motorcycles and motorcycle parts and accessories for export, according to Chinese Central Government statistics. China produces roughly half of the world's motorcycles, according to government data. Foreign motorcycle manufacturers including Honda and Yamaha have factories operating in Guangdong.

More than two dozen Chinese cities have motorcycle use restrictions in place to help curb air pollution, according to the State Environmental Protection Administration. Ningbo, just south of Shanghai on China's east coast, bans motorcycles from city streets, and Beijing and Shanghai have imposed tight restrictions on new motorcycle licenses.

#### **46. China Still Facing Severe Environmental Problems**

In a new report, the National Bureau of Statistics has drawn attention to the growing problem of resources in China's rapidly developing economy. It's Statistical Report on Economic and Social Development, which it has released every year since 1978, shows that the consumption of energy and other main mineral resources has increased significantly. According to preliminary estimates, nationwide

primary energy consumption stood at 1.678 billion tons of standard coal equivalent, up by 10.1% year on year. Crude oil consumption amounted to 252 million tons, up 12%. Coal consumption stood at 1.579 million tons, up by 13.6%.

Air quality has shown some improvement. Only 141 of the 340 cities surveyed reached level two in the nationwide air quality standards, 41.5% of the total but up 7.7 percentage points year on year. 108 cities were in the level three bracket, and another 91 cities fell below level three, the NBS noted.

#### **47. BP, PetroChina Ink Retail JV Deal**

BP and PetroChina have signed a contract to set up an oil retail joint-venture that aims to run 500 gas stations in southern China's Guangdong Province, though the deal needs first to go through yet another round of government approval procedures. One more nod from a department of the State Council is required before the full government endorsement can be achieved.

China's State Council granted approval in the second half of last year for the proposal to allow PetroChina and BP to jointly run 500 gas stations in Guangdong, and for Sinopec and Shell to run 500 gas stations in eastern China's Jiangsu Province.

China is obliged to open its domestic oil retail market starting in 2004 after being accepted as a member of the World Trade Organization.

BP has already taken part in the operation of more than 350 gas stations in Guangdong. The outlets will be officially placed under the joint venture

with PetroChina once it gains government approval. Besides Guangdong, BP has also struck an accord with Sinopec to build gas stations in eastern China's Zhejiang Province and has handed its feasibility studies to the central government. BP divested as a strategic investor from both Sinopec and PetroChina at the beginning of this year, cashing in nearly USD 2 billion.

#### **48. Asia's Carbon Emissions Expected to Grow Rapidly**

Asia's carbon dioxide emissions will surge 90 percent from 2000 levels by 2020, accounting for as much as 70 percentage of global emission growth, according to a report, Asia and World Energy Outlook, released March 10 by the Japanese government's Institute of Energy Economics. China's emissions, rising in tandem with the country's booming economy, will account for as much as 30 percent of the growth, the report said. Asia's energy consumption through 2020 will grow an annual rate of 3.2 percent, reaching 4.6 billion tons equivalent of crude oil, or 90 percent above the 2.4 billion tons consumed in 2000, the report said. Half the growth in Asia's energy consumption will come from China and one-fifth from India, it said. Motor vehicle use also will expand markedly throughout the continent, with growth in China leading the way. Vehicle ownership there will reach 120 million in 2020, according to the report.

#### **49. Singapore Adopts Tax Incentives For Clean Vehicles**

Singapore's ambient air quality is one of the best in the world with all major pollutants well within international standards. However, PM2.5 or fine particulate matter less than 2.5 microns in size is of growing concern. The US

Environmental Protection Agency (USEPA) set the standard of 15ug/m<sup>3</sup> for PM<sub>2.5</sub> in 1997. Many major cities in the world - such as Los Angeles and London - are unable to meet the standard at present and Singapore is also one of those cities; its average PM<sub>2.5</sub> level was 19 ug/m<sup>3</sup> in 2003.

In Singapore, diesel vehicles contribute about 50% of the total PM<sub>2.5</sub> emissions. To bring down the PM<sub>2.5</sub> levels in Singapore to within acceptable standards, the National Environment Agency (NEA) will implement the Euro IV emission standard for all new diesel vehicles registered from 1 October 2006. This will give motor traders a lead-time of about two and a half years to plan and source for Euro IV diesel vehicles or other equivalent alternatives, e.g. compressed natural gas (CNG) vehicles. Diesel vehicles registered before 1 October 2006 are not affected by the new emission standard. There is also no change to the emission standard for non-diesel vehicles.

To ease the transition to Euro IV emission standards, the Government will introduce an incentive package to encourage an early switch from Euro II diesel vehicles to either Euro IV compliant diesel vehicles or CNG vehicles (buses, taxis and other commercial vehicles) before Euro IV is implemented in October 2006. The tax rebate package, which will apply to new registrations of CNG and Euro IV diesel taxis, buses and commercial vehicles from 1 June 2004 to 30 September 2006, will comprise the following:

- Under the current Green Vehicle Rebate (GVR) scheme, CNG taxis already enjoy an annual registration fee (ARF) rebate of 20% of the open market value (OMV) and CNG buses are exempt from paying ARF until end 2005. CNG taxis and buses

also enjoy a 20% road tax rebate.

- An additional ARF rebate of 80% of OMV will be given for CNG taxis registered during the transition period from 1 June 2004 to 30 September 2006, giving a total ARF rebate of 100% of OMV from 1 June 2004 to 31 December 2005 and 80% from 1 January 2006 to 30 September 2006.
- Euro IV diesel taxis registered from 1 June 2004 to 31 December 2005 will enjoy an ARF rebate of 100% of OMV and those registered from 1 January 2006 to 30 September 2006 will enjoy an ARF rebate of 80% of OMV. CNG taxis continue to enjoy exemption from special tax until 31 December 2005.
- CNG and Euro IV diesel buses and commercial vehicles will be exempted from paying ARF (currently at 5% of OMV) until 30 September 2006.

#### **50. China's Crude Oil Imports Up 35.7% in First Quarter**

China's imports of crude oil as well as refined oil products both registered more than a third in growth in the first quarter of this year, with exports of oil products down by more than 34%, as domestic demand shows little sign of receding. According to statistics released by the China Customs, crude oil imports totaled 30.14 million tons in the first quarter, rising 35.7% compared to the same period last year. The price of the imports stood at an average of USD 32.5 per barrel.

Crude oil production in the quarter was previously reported at 42.62 million tons, only 12.5 million tons more than the import.

Inflow of refined oil products in the quarter was recorded at 8.31 million tons, up 39.6% year-on-year. By contrast, exports of refined products plummeted 34.5% in the three months to 2.33 million tons as of March.

China produced 12.96 million tons of gasoline and 24.03 million tons of diesel in the first quarter of this year, marking a yearly growth of 12.9% and 20.8% respectively. Sinopec, the largest oil refining company in China, is said to have started importing diesel from overseas, with the initial volume determined at 120,000 tons. Reportedly, 90,000 tons of the imported diesel will be supplied to Guangdong Province in the south, with the other 30,000 tons to Zhejiang Province in the east. The two provinces are among the areas where last year's gas station supply squeeze first appeared and took the heaviest toll.

#### **51. Sinopec Markets Highest-Grade Gasoline And Diesel In Shanghai**

Sinopec announced that it has started offering the highest-grade gasoline and diesel on the domestic market at a limited number of gas stations in Shanghai starting April 10. The new diesel, named as the "urban clean auto diesel", has only a quarter of the sulfur content of the common diesel and matches the EURO II emission standard for fuel quality.

According to Sinopec, the premium fuel is aimed mainly at the expanding fleet of luxury cars appearing on the streets of Shanghai. There are already 200,000 private cars in the city, and more than 2,000 luxury cars were imported last year. Still, the company has only decided to provide the 98# high-grade gas at 22 outlets, and the urban clean diesel at 105 outlets, compared to a chain of over 550 outlets operated by

the company in Shanghai, 70% of the total number of gas stations in the city.

The price for the 98# gasoline is 15% higher than that of the 97# gas, the previous highest-grade gas provided in Shanghai, with a price of RMB 4.26 (USD 0.51) per liter. Sales of the gas are expected to reach only an accumulated 2,500 tons by the end of this year, with those of the clean diesel estimated to total around 100,000 tons.

Sinopec's leading refinery Gaoqiao in Shanghai is the supplier of the premium gas and diesel.

China is not applying the EURO II standard for emission on light vehicles nationwide until July this year, enabling most drivers in the country to make do with the lowest-grade 90# gasoline, which is also the most popular type of fuel and has become a price benchmark for the market.

#### **52. Sinopec Yanshan Refinery Will Produce EURO III Fuels In 2005**

Sinopec's leading refinery, Yanshan, located in Beijing has launched an upgrade and renovation project to produce gasoline and diesel that will allow it to comply with the EURO III emission standards by 2005. The cleaner products will be mainly supplied to the market in Beijing.

Yanshan, with 9.5 million tons of annual refining capacity, has been producing gasoline and diesel in the plant to the EURO II quality standard.

China imposed the EURO I emission standard on domestic motor vehicles from January 1, 1999 and upgraded it to the EURO II standard for heavy load vehicles from September 1 last year. The stricter EURO II standard for lighter vehicles, or those weighing less than 3.5

tons, is planned to be implemented nationwide on July 1 this year.

### **53. VW To Make More Diesel Cars In China**

According to Chinese press reports, FAW VW intends to produce 10,500 diesel cars this year, including 2,500 units of the newly launched TDI Bora and 8,000 units of the SDI Jetta. FAW VW introduced the SDI Jetta in 2002, becoming the first carmaker in China to deliver diesel cars. Last year, only 4,600 FAW VW Jetta models were diesels.

The 1.9-liter TDI Bora was recently launched in Xiamen, in East China's Fujian Province; its carbon dioxide emission is 30 per cent lower than the same-sized petrol engine and it meets the European III emission standards.

The company will also introduce TDI diesel engines into its Golf notchback and Audi A6 luxury sedan at the end of the year.

However, other Sino-foreign joint ventures do not appear to be actively seeking the production of diesel engine cars.

### **54. Philippine Agencies Directed To Add CME to Diesel Fuel**

Philippine President Gloria Arroyo has signed a directive ordering all government agencies and state-run companies and corporations to use at least 1 percent by volume coco-methyl ester (CME) in their diesel fuel, according to Environment Secretary Elisea Gozun. Gozun said Memorandum Circular 55 was signed by Arroyo in February, but was only made public by the environment department in recent days. It is meant to support the Clean Air Act of 1999, which seeks to

promote alternative fuels to lessen potentially dangerous emissions.

Studies funded by the government found that CME blended with diesel can reduce harmful emissions such as particulates, sulfur, and greenhouse gases, Gozun said. The Department of Environment and Natural Resources (DENR) already is using biodiesel in its diesel fueled vehicles, she added, noting that other government agencies were expected to follow suit.

According to the draft guidelines prepared by the DENR, CME suppliers would have to make the product available in small packages to all government agencies. Government agencies without fuel tank facilities will have to add the required volume of CME into vehicle tanks before refueling with the corresponding amount of diesel.

If the coco diesel program proves to be a success, it would have to be expanded to include private agencies and public transport systems, Gozun said. A panel that would evaluate and conduct field tests also will review the effectiveness of CME and further formulate the procedures for monitoring emissions.

CME is one of the chemical products derived from coconut oil and its development for commercial use is being aggressively pushed by the government in a bid to provide an alternative source of fuel and bring down prices. The fuel, according to tests conducted by the government, may be used in its pure form or as an additive to diesel fuel. It requires no engine modification and is considered a cleaner alternative to regular diesel because it contains no sulfur and is believed to reduce engine wear.

### **55. Volvo, Toyota Ink \$350 Million**

## China Deals

Car makers Toyota and Volvo inked two deals worth more than \$350 million to make engines with China's top auto maker, enabling them to avoid costly import tariffs on parts.

Toyota will set up a 50-50 joint venture worth 16 billion yen (\$152 million) with First Automotive Works (FAW) to make 40,000 engines a year, initially for luxury cars, in the city of Changchun in northeastern China.

FAW will also team up with China National Heavy Truck Corp and Volvo, the world's number two truck maker, to build a \$200 million-plus plant to produce 50,000 engines a year by 2010.

Volvo said it would invest \$105 million for 52 percent of the plant. The two Chinese firms will each own 24 percent.

The deal between Toyota and FAW follows an agreement in August 2002 to collaborate on a broad range of auto operations in China, the world's fastest-growing major car market. It will help Toyota circumvent hefty import tariffs of up to 50 percent and bring costs down by moving parts production closer to car assembly, analysts said.

The engine is one of the most expensive and complicated parts of a vehicle. Most foreign auto makers now bring in the required components from overseas.

Toyota and FAW already make engines for small cars as well as the Vios, Corolla and other brands, made together at a plant in the northern city of Tianjin.

Jan van Stetten, the head of Volvo's truck division in China, said engines from the new plant would initially be for sale in China, with exports being

considered later.

Last summer, Volvo signed a deal to form a 1.6 billion Yuan truck joint venture with China National, with an initial capacity of 2,000 trucks per year.

Car sales in China almost doubled to around two million units in 2003, though analysts expect that growth rate to slow this year. Vehicle sales - including everything from buses to cars and tractors - grew 34 percent in 2003 to 4.4 million.

Toyota is FAW's second major foreign partner after Germany's Volkswagen AG. The Japanese company is a relative late entrant to the Chinese market, where rivals Volkswagen and General Motors Corp have been making cars for years.

The new plant will start manufacturing 3.0-liter V6 gasoline engines early next year with the aim of producing about 40,000 units in the first year, according to Toyota. It will make engines for the Crown luxury sedan, which is to be made at their Tianjin FAW Toyota Motor Co Ltd venture.

## 56. SEPA Pushing For Green GDP Index

China is taking steps to gauge the performance of local officials in meeting environmental goals, and it plans to use this information in evaluating them for promotion, officials from the State Environmental Protection Administration (SEPA) told at an annual news conference March 25.

"We want to weaken the role of GDP [gross domestic product] and add more environmental components" in assessing officials' performance, Deputy Minister Wang Jirong told reporters, signaling that raw economic growth will

no longer be the sole measure of success. Beijing began developing the "green GDP" concept in late 2003. SEPA and China's National Bureau of Statistics are now working together to establish a green GDP index, which would subtract the costs of environmental degradation and resource depletion from regional economic growth figures.

Pan Yue, another SEPA official, was recently quoted in the Chinese media as saying that the new evaluation method will first be introduced in select provinces, and that Sichuan province, in China's southwest, is already piloting the system.

China has set Beijing as the lead city in implementing policies to deal with urban environmental issues. Numerous projects to improve water supply, wastewater treatment, waste management, and to build natural gas infrastructure to replace coal as the primary residential fuel source are underway in the capital. Many of these projects are tied to Beijing's efforts to clean up its environment before it hosts the Olympic Games in 2008. The government estimates that \$6.5 billion will be spent on environmental engineering projects in the city between 2002 and 2007. But Wang acknowledged, "There are gaps between what we have achieved and what we want to achieve."

In China's southern provinces, acid rain and industrial pollution remain top problems. More than half of China's cities and towns suffer from acid rain, particularly in the provinces of Hunan, Zhejiang, and Jiangxi. Coal burning, which supplies about three-quarters of China's energy, is the main source of pollution causing acid rain.

Of the \$85 billion that China estimated would be spent on environmental

projects in the Tenth Five-Year Plan (2001-05), \$66 billion was earmarked for water and air pollution control. Of the total, more than a third is expected to come from provincial and local governments. According to Wang, however, many projects scheduled for completion next year under the current five-year plan have fallen behind schedule. She said the main reasons for this are that projects got a late start or were short of funds.

#### **57. Japan's Carbon Emissions up 4.5 Percent in 2001**

Japan's carbon dioxide emissions from industry reached 971 million tons, or 4.5 percent above 1990 levels, in fiscal year 2001, which ended in March 2002, the Ministry of Environment has announced. Gross national CO<sub>2</sub> emissions for the year reached 1.214 billion tons, up 8.2 percent from 1990, of which business activities accounted for 80 percent. Emissions from different sectors were as follows: manufacturing down 5.1 percent to 452 million tons; energy down 5.6 percent to 78 million tons; transport up 17.1 percent to 191 million tons; shops, restaurants, and offices up 30.9 percent to 211 million tons; and industrial processing, including primarily cement production, down 11.3 percent to 69 million tons. Officials said the release of the data was part of a process of preparing for the introduction of "economic measures" such as carbon taxes and vehicle use regulations to help cut emissions as Japan strives to meet its Kyoto Protocol targets. Under the agreement, Japan committed to reducing its carbon dioxide emissions by 6 percent from 1990 levels over the period 2008-2012.

#### **58. Japan to Boost Environmental Specifications**

The Ministry of Economy, Trade, and Industry plans to nearly triple the number of environmental specifications under the Japan Industrial Standards this year to encourage production of more environment-friendly products and to boost product competitiveness, the ministry said April 5. By March 2005, the end of fiscal 2004, the trade ministry plans to establish 85 new environmental specifications, up from 32 in fiscal 2003, said officials of the ministry's Industrial Technology and Environment Bureau April 5. By the end of fiscal 2006 (March 31, 2007), it plans to establish more than 200 environmental specifications, they said.

The Japan Industrial Standards is a government certification program comparable to the European Union's United Nations Economic Commission for Europe programs. Products that meet JIS standards, such as light bulbs and batteries for durability and energy conservation, will be permitted to bear the "JIS" mark. In the 1960s and 1970s, when Japanese industrial product quality was less reliable than it is now, Japanese consumers used the JIS mark to make purchasing decisions. Because product quality has risen substantially since then, Japanese society has come to vest the JIS mark with less importance, but it continues to command respect for industrial and household use.

The ministry said the specifications under consideration for fiscal 2004 include quality standards on the next-generation fuel, Dimethyl ether; methodologies for collecting formaldehyde in indoor areas; and calculation methodologies on energy conservation properties of home electrical appliances, the ministry said.

Over the next three years, the ministry said it will be studying specifications to promote recycling and reuse and to

stem global warming.

### **59. World Bank Anticipates China Slowdown**

According to its latest *East Asia and Pacific Regional Update*, the World Bank predicts that China's economic growth rate will slow to 7.7% in 2004 and 7.2% in 2005.

China's GDP expanded by 9.1% in 2003. From a demand perspective, the fast growth has been driven mainly by an investment boom and the associated credit expansion. Recognizing the danger of excessively rapid increases in investment and credit expansion on the economy, the Chinese authorities are working hard to slow the country's pace of growth to a more manageable level, the report states.

China's imports surged 40% in 2003, and the figures from the first quarter of 2004 show continued growth, mostly from China's neighbors. Although slower growth in China would hurt other economies in the region, the impact is expected to be modest.

### **60. Asia Oil Imports Hit All-Time High In 2003**

Oil demand in Asia hit a peak at 21.6 million barrels daily last year and the region's dependence on oil imports reached an all-time high at 64 percent, Hawaii-based FACTS Inc said in a report released in April. The consultants forecast that Asia's dependence would reach 69 percent by 2010 based on a demand projection of 25.2 million barrels per day (bpd) as regional output of crude stays flat but demand continues to grow.

FACTS bases overall demand on crude processing plus direct use of crude oil



and net imports of refined products.

The 2003 demand estimate was 350,000 bpd below the 21.95 million bpd that the International Energy Agency (IEA) says Asia consumed last year.

Japan and South Korea remain most reliant on Middle East crude in their refining slate with Japanese dependence at 85-90 percent and Korea at almost 80 percent in the first three quarters of 2003. China, the second-biggest consumer in the world after the United States, imported on average 400,000 bpd more crude last year for a total 1.8 million bpd, with Middle East barrels accounting for 50 percent.

FACTS said Chinese buying of African crude shot up about 40 percent to 444,000 bpd from 316,000 bpd in 2002, with 46 percent coming from Angola, 28 percent from Sudan, 15 percent from Congo and seven percent from Equatorial Guinea. China also imported 105,000 bpd of crudes from Russia in 2003, up from 61,000 bpd a year earlier, with the majority sent via railway.

India imported about 1.8 million bpd of its crude requirements in 2003, up about 200,000 bpd, with 70-72 percent from the Middle East. West African grades made up 13 percent of imports with Nigeria meeting the bulk of the volumes.

FACTS estimated that crude and condensate production in Asia reached 7.47 million bpd in 2003, down from 7.52 million bpd in the year earlier. Output slipped mainly in Australia and Indonesia, while Thailand and Malaysia saw gains.

China, Asia's biggest crude producer, kept output stable compared with 2002 at roughly 3.4-3.5 million bpd. Heavy sweet crude remains the dominant barrel in regional output.

The five biggest producers - China, Indonesia, Malaysia, India and Australia - accounted for 88 percent of regional output in 2003, down from 94 percent a year earlier, as production in Vietnam, Brunei and Thailand rose.

### **61. Japanese Report Predicts Jump In Asian Carbon Emissions**

Asia's economic growth will drive increased energy consumption and carbon dioxide emissions so that by 2015 carbon emissions of the developing world, driven especially by China and India, will eclipse those from developed countries according to a new Japanese government report. Member countries of the Organization for Economic Cooperation and Development will emit 13.358 billion tons of CO<sub>2</sub> in 2015, up 11.8 percent from 2000 levels, while developing countries will emit 13.746 billion tons, up 51 percent from 2000, said the report, which was prepared by the government's Institute of Energy Economics, an arm of the Ministry of Economy, Trade, and Industry. Russia, Eastern Europe, and other countries with transitional economies will emit 4.107 billion tons in 2015, up 33 percent from 2000. Combined, the three categories of countries will emit 31.211 billion tons, up 33 percent from 2000.

The report said developing countries' energy efficiency will improve over the coming years, but that energy intensity per capita will increase in line with economic growth.

It forecasts that from 2000 to 2025, U.S. CO<sub>2</sub> emissions will grow 41.6 percent; Europe, 17.6 percent; Japan, 23.2 percent; Korea, 77.6 percent; China, 236.4 percent; India, 203.2 percent; other Asian economies, 72.0 percent; transition economies, 50.5 percent; the Middle East, 74.7 percent; Africa, 63.3

percent; and Latin America, 99.6 percent.

## MIDDLE EAST

### 62. Egypt Pushes CNG

Egypt is trying to reduce air pollution from car emissions by giving incentives to use natural gas as fuel, according to State Minister for Environmental Affairs Mamdouh Riad Tadrus. He also said most of Egypt's industry conformed to European pollution regulations and those that did not were offered soft loans to improve their operations.

The World Bank estimates that environmental degradation from pollution costs Egypt on average five percent of its annual gross domestic product (GDP), amounting to some 15 billion Egyptian pounds (\$2.42 billion). The report in June 2002 said that percentage was twice that of industrialized countries, adding that air pollution was the highest cost to Egypt's already stagnating economy.

But Tadrus said the government was introducing a smart card system whereby a driver can convert their car to use natural gas, which he said emits less pollutants than gasoline. They would then use the smart card to buy gas and the money saved would pay for the conversion. Natural gas costs about half as much as gasoline.

Egypt is a growing gas producer, with proven reserves of 62 trillion cubic feet.

## GENERAL

### 63. Ships' Emissions Twice As Large As Previously Estimated

As reported in Acid News, global emissions of carbon dioxide and

nitrogen oxides from shipping may be twice as high as previously estimated, according to a recent study<sup>2</sup>. Sulphur dioxide emissions may be 50 per cent higher. The authors concluded that internationally registered ships – cargo and commercial vessels as well as military ships – consume about 289 million tons of fuel per year, of which 80 per cent is heavy fuel oil. That is about twice as much as in previous estimates, which have been based on the volumes of marine fuels that were sold internationally.

Emissions both of carbon dioxide and nitrogen oxides increase in direct proportion to the amount of fuel consumed – in other words, they would also double, as would those of hydrocarbons and particles (PM<sub>10</sub>), although the basic assumptions are in this case less certain. Following an adjustment downwards of the average sulphur content of the fuel to 2.5 per cent (2.7 per cent in residual fuel, 1.0 per cent in marine distillate oil and 0.25 per cent in marine gas oil), emissions of sulphur dioxide were estimated to increase by only 50 per cent.

A possible explanation for fuel consumption turning out to be twice as large as had been thought may be found, according to Corbett and Köhler, in the fact that the fuel used by internationally registered shipping is booked in two sets of statistics, domestic and international.

If international shipping moves closer to the coasts than had been thought, that may affect the calculations of the extent to which the fallout of pollutants over

<sup>2</sup> Corbett, J. J., and H. W. Köhler. Updated emissions from ocean shipping. *J. Geophys. Res.* Vol. 108(D20), 4650, 2003.

near-shore waters can be ascribed to shipping.

“Given that nearshore emissions from ships may be much larger than depicted in global inventories, regional and local policy jurisdictions may have additional reasons to consider stronger action than the global standard set by the International Maritime Organization,” say the authors.

They also produced an analysis showing that most of the uncertainty regarding the amount of fuel consumed derives from estimates of vessel duty cycle and hours of operation. The same factors are also of greatest importance for calculations of the amount of pollutants emitted, although here the choice of emission factors is also important.

The study applies to all ocean-going vessels of more than 100 gross tons, almost 90,000 altogether, as well as approximately 20,000 military vessels. The total installed engine power comes to some 450,000 MW.

#### **64. U.S., U.K. Officials Chair Climate Change Panel**

U.S. Senator Olympia Snowe (R-Maine) and U.K. Member of Parliament Stephen Byers (Labor) will co-chair an international climate change task force established to develop proposals for multilateral action on climate change in the post-2012 period. Snowe and Byers aim to finalize proposals in November for distribution to governments worldwide. They held their first meeting in the United Kingdom March 22. Other task force participants include R.K. Pachauri, Chairman of the Intergovernmental Panel on Climate Change; Adair Turner, Vice-President of Merrill Lynch Europe and former Director General of the Confederation of

British Industry; Professor Ni Weidou, Director of the Clean Energy Center at Beijing's Tsinghua University; and Bob Carr, Premier of the Australian state of New South Wales. The task force was jointly established by the Center for American Progress in the United States, the U.K.'s Institute for Public Policy Research, and the Canberra-based Australia Institute. In a March 16 statement, the three institutes noted that the United Kingdom will hold the presidencies of both the Group of Eight nations and the European Union in 2005. "Prime Minister Tony Blair has already pledged to make progress on climate change a top priority," the statement said. International negotiations on the post-2012 approach to multilateral climate change policy are due to begin in 2005.

#### **65. Report Predicts Asthma Epidemic from Pollution**

Poor and minority children are likely to develop asthma at worsening rates due to global warming and air pollution, environment experts have predicted. They released a report<sup>3</sup> showing that as the climate gets warmer, allergens such as pollen and mold will flood the air, interacting with urban pollutants such as ozone and soot to fuel an already growing epidemic of asthma.

"It is affecting the trees, the molds, the subsurface organisms," Dr. Paul Epstein of Harvard Medical School's Center for Health and the Global Environment, told a news conference. "The combination of air pollutants, aeroallergens, heat waves and unhealthy air masses -- increasingly

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<sup>3</sup> "Inside the Greenhouse: The Impacts of CO<sub>2</sub> and Climate Change on Public Health in the Inner City.

associated with a changing climate -- causes damage to the respiratory systems, particularly growing children, and these impacts disproportionately affect poor and minority groups in the inner cities," the report reads.

The report finds that asthma among U.S. preschool children, age 3 to 5, grew 160 percent from 1980 to 1994.

"This is a real wake-up call for people who think global warming is only going to be a problem way off in the future or that it has no impact on their lives in a meaningful way," said Christine Rogers, a senior research scientist at the Harvard School of Public Health. "The problem is here today for these children and it is only going to get worse."

Rogers, Epstein and the American Public Health Association worked together on the report. The report finds that in some regions, winter is ending weeks earlier than before, and plants are releasing their pollen earlier than ever, accelerating the hay fever season. Pollen and fungal spores can worsen asthma, a serious medical condition whose symptoms include shortness of breath, cough, wheezing, chest pain or tightness.

The Centers for Disease Control and Prevention said nine million U.S. children have been diagnosed with asthma and more than 4 million have had an asthma attack in the past 12 months. It says 4,487 people died from asthma in 2000, most of them adults. Asthma affects blacks more than any other group and affects 16 percent of children from poor families as opposed to 11 percent of children living above the poverty line. The CDC also says 9 million U.S. children were reported with respiratory allergies in 2002.

The report makes clear links among asthma, allergies and urban air

pollution.

"Rising levels of carbon dioxide, in addition to trapping more heat, promote pollen production in plants, increase fungal growth and alter species composition in plant communities by favoring opportunistic weeds like ragweed and poison ivy," the report reads.

"Diesel particulates help deliver and present pollen and mold allergens to the immune system in the lungs," it adds.

"The good news is we can do something about this," Epstein said. "Green" buildings with roof gardens to keep them cool and insulation to keep heat from leaking would help, as would improving public transport and encouraging the use of hybrid vehicles that rely less on fossil fuels.

## 66. Oil Price Hits 3-1/2 Year High

International crude prices recently hit their highest level for 3-1/2 years, exceeding peaks hit during last year's Iraq war, after the U.S. government reported a fall in stocks of green gasoline and violence mounted in the Middle East.

London's Brent crude jumped 50 cents to \$34.78 a barrel, its highest since October 13, 2000, when it reached \$35.07. U.S. light crude in New York rose 45 cents to \$37.98 a barrel, within 20 cents of a 13-year closing high hit last month.

Low U.S. fuel inventories have combined with rising Chinese demand, heavy buying from speculative hedge funds and Middle East tensions to drive up international oil prices. The recent rise followed a report from the U.S. Energy Information Administration showing a fall of 1.4 million barrels, or

5.5 percent, in stocks of reformulated gasoline (RFG), sold at a third of U.S. pumps mostly in smog-prone urban areas. Tight U.S. gasoline stocks have fuelled fears of a supply crunch when summer vacation demand kicks in. Refineries are also struggling to make enough of a new environmental grade of gasoline being introduced in some U.S. states.

The fall in RFG stocks outweighed a 3.2 million barrels rise in crude inventories, as high imports continued to replenish stocks. Overall gasoline stocks also rose, by 900,000 barrels to 200 million, the EIA said.

Prices have surged this week after foiled attempts to bomb Iraq's key Basra crude export terminal. The port has resumed exports following a brief closure, but analysts said anxiety was high that there could be further attacks on oil infrastructure as violence raged in Iraq.

#### **67. UN Chief Says Iraq, Terror Divert Focus from Environment**

The Iraq war and terrorism have shoved critical environmental problems like global warming and dwindling natural resources out of the world spotlight, U.N. Secretary-General Kofi Annan said at a recent meeting. "However understandable that focus might be, we cannot lose any more time, or ground, in the wider struggle for human well-being. Just as we need balanced development, so do we need a balanced international agenda," the U.N. leader said.

Annan was addressing a meeting of more than 80 environment ministers and other high officials, called to gauge progress toward the global goal of "sustainable development," in which economic growth would no longer come at the expense of environmental degradation.

While there has been important progress toward achieving sustainable development, key challenges remain, Annan said. Twelve years after the Rio de Janeiro Earth Summit, "the natural resource base is under siege. Unsustainable patterns of consumption and production are still the norm. Progress in slowing deforestation and biodiversity loss has been glacial," he said.

Annan singled out the United States and Russia for undermining efforts to rein in global warming, saying unless Moscow and Washington ratify the 1997 Kyoto protocol limiting greenhouse gas emissions, "we cannot fully and properly address the issue of climate change."

Environment ministers addressing the conference stressed that steadily increasing the number of people with access to clean water, sanitation and adequate housing would go far toward achieving broad U.N. anti-poverty goals. But officials of poor nations replied they had neither the money nor the means to go forward.

#### **68. Auto Industry Developments Regarding Advanced Technologies**

##### **A. Toyota Pushing Green Strategy**

TOYOTA has moved into the position of second-biggest carmaker in the US, set itself a global sales target of four million vehicles next year, and is worth more than the Detroit big three put together. It is on the brink of becoming the first Japanese company in history to post one trillion yen in net profits, but the carmaker is already planning for a world beyond the combustion engine that has powered it into the corporate pantheon.

Fujio Cho, Toyota's president, explained that hybrid cars and fuel-cell technology

are not about corporate image but about corporate survival in a world without oil. "The rapid expansion of the Chinese economy and the progress of its motorization is creating demand. But various issues are arising from that: on a worldwide basis, future demand for oil will eventually far exceed supply," he said. Mr. Cho's prediction of a China-driven oil shortage, combined with the present high crude price, create a huge potential market for Toyota's technology. It is no coincidence that the research that has made the alternative fuel revolution possible has been most energetically pursued in Japan, a country with few natural resources and a series of very complex relationships with the countries that produce oil.

Analysts estimate that Toyota's hybrid technology is about three years ahead of the rest of the auto industry. Toyota has recently doubled production of the Prius, a hybrid driven by both petrol and electric motors, and will be producing 130,000 next year.

Ford recently agreed to buy hybrid technology directly from Toyota, and the Japanese giant has just announced that it will release a hybrid version of its popular Camry model, the best-selling car in the US, by 2006.

But Mr. Cho's sights are clearly set on China, a market with the potential size to give sales of alternative-fuel cars the vital scale they need to succeed. Toyota is working with the China Automobile Technology Research Centre and is preparing the ground for launching the Prius on to the Chinese market.

"Hybrid vehicles are not yet at a level of critical mass," he said, "but with this technology, scale will be important. Once you have the scale, the motors and batteries would have to become cheaper and that of course would be welcome. We are at the centre of the

cycle."

## B. Mixed Views On Hybrid Vehicles

Ford Motor Co. chief Bill Ford touted his company's plans for a "hybrid" gasoline-electric version of the Escape sport utility vehicle during the New York International Auto Show. In addition to the Escape, which will be delivered starting this fall, Ford plans to sell a hybrid version of the Mercury Mariner SUV in the fall of 2006, and a mid-sized car later in this decade. The company also regrouped efforts for developing hybrid and fuel cell technologies. "People are concerned about where gasoline prices might be heading. At the same time they continue to want the convenience and function of sport utility vehicles," Ford told hundreds of reporters at a news conference. Ford "is the first automaker to offer customers a remarkable value proposition: no compromise."

But not all automakers share that enthusiasm.

BMW Chairman Helmut Panke, during the keynote speech, said the typical gasoline-battery hybrid technology made popular by Toyota's Prius car is only one solution. "On the way to the hydrogen economy, we will have different solutions, but right now 'hybrid' seems to be the right buzzword," said Panke - who later compared fuel cell vehicles with amusement-park bumper cars.

Elsewhere at the auto show, industry executives said they also are developing alternatives to the gasoline-fueled internal-combustion engine.

A Toyota spokesman at the show said the Japanese automaker will deliver hybrid Highlander SUVs next February, following production of a hybrid version of its sister vehicle, the Lexus RX400h.

American Honda U.S. sales chief Bill Colliver said the company has not announced plans for other models outside a hybrid Honda Accord to be introduced this fall. He denied speculation the company's Acura division plans to produce a hybrid version of the RL luxury sedan.

Mike Albano, a spokesman for General Motors, said the company intends to expand sales of two hybrid models - the Chevrolet Silverado and GMC Sierra full-size pick-up trucks - to the public in 2005. The world's largest automaker also is developing Chevy Trailblazer and GMC Envoy utility vehicles with "displacement on demand" (DOD) eight-cylinder engines, which shut down cylinders when a driver needs less power. GM sees 1 million DOD engines, on the road by mid-2006, the spokesman said.

### **C. Hybrid Sales Up Significantly In 2003, Report Finds**

An automotive industry consumer information group is reporting that nationwide registration for gasoline/electric hybrid vehicles was 43,435 in 2003 -- up about 26 percent from the previous year.

Analysts with the group, R.L. Polk & Co., said sales of hybrids have enjoyed a compound growth rate of 88.6 percent since they came on the U.S. market in model year 2000. That year, 6,479 hybrids were registered in the U.S.

With these numbers, the company predicts hybrid sales will likely rise even more in 2004, especially if the price of gasoline remains as high as it is. The report comes one month after a New York research firm studying high tech trends released data suggesting hybrids could make up at least 10 percent of the 2 million annual U.S. mid-sized

passenger vehicle market by 2006.

"People are buying hybrids because of mileage benefits and environmental concerns. With rising costs of gas in the U.S., hybrid registration will likely increase in 2004," said Lonnie Miller, director of Polk's Analytical Solutions department. Anecdotal evidence suggests another factor fueling hybrid sales are state laws, such as in Virginia, allowing the vehicles to drive in HOV (High Occupancy Vehicles) lanes without having to meet the minimum passenger requirements. Similar legislation is pending in California.

California leads the nation in hybrid buyers, with 11,425 registrations, followed by Virginia with 3,376 registrations, according to the report. Florida was in third place with 1,996 registrations, followed by Washington State with 1,972 registrations, and Maryland coming in fifth with 1,851 registrations.

While Toyota's new Prius has been receiving most of the recent media fanfare -- even receiving *Motor Trend's* Car of the Year award-- it was Honda's hybrid version of the Civic sedan that achieved 50 percent of the total hybrid market with 21,750 registrations, according to the report. The Prius reached 47 percent of the market share with 20,387 registrations, and the Honda Insight accounted for the remaining 3 percent with 1,298 registrations.

According to Miller, the average buyer of hybrids is slightly older than a conventional vehicle buyer and has a higher income. The average age of a hybrid buyer is 49.6 years old, compared to an average age of 47.6 years old for conventional vehicle buyers, according to the Polk report.

The average income of hybrid vehicle buyers is \$78,350 per year, while

conventional vehicle buyers make an average of about \$71,576 annually, according to the report.

#### **D. Various Automakers Putting Fuel Cell Test Cars On Road**

Major automakers plan to put dozens of fuel cell cars on U.S. roads within a year as they test futuristic hydrogen-powered vehicles, which got a recent boost from the promise of \$575 million in U.S. government and private funding.

DaimlerChrysler said it is planning to put up to 37 fuel cell cars in U.S. fleets as soon as this summer, while Ford Motor Co. plans to build up to 30 fuel cell cars late this year.

The Department of Energy has announced plans to invest \$350 million in science and research projects into hydrogen and fuel cells. Private investment will add another \$225 million over the next five years, and help bring fuel cell vehicles closer to commercialization in five to 10 years, Secretary of Energy Spencer Abraham told a news conference in Detroit.

Hydrogen-powered fuel cells could sharply reduce, or even eliminate, many of the smog-forming emissions and greenhouse gases from the tailpipes of cars and trucks.

The U.S. government's \$375 million commitment is the first phase of \$1.2 billion in spending that President Bush has promised to bring fuel cells closer to reality for consumers.

DaimlerChrysler said that pending final negotiations with the government on funding, the German automaker is ready to put from 20 to 37 fuel cell vehicles into fleets in Michigan and California by this summer. The U.S. fleet is part of 60 fuel cell cars that DaimlerChrysler plans to test around the world.

Ford plans to begin building up to 30 of its Ford Focus FCV fuel cell vehicle in the fourth quarter this year, pending negotiations with the Department of Energy and various state and local authorities on funding. The vehicles will be placed in fleets in Michigan, California and Florida. In conjunction, oil company BP plans to build a network of hydrogen fueling stations to support the Ford fuel cell cars.

Japanese automakers Toyota, Honda and Nissan plan to put up to 65 fuel cell cars into a California fleet within five years, as part of the government initiative. German automaker BMW plans to assign up to 15 cars that burn hydrogen in an internal combustion engine in the project.