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1. **Landmark Ruling Upholds Germans' Right to Clean Air**

A landmark case upholding the citizen's right to non-polluted air could lead to local governments in Germany being held responsible for the health of their constituents and the cleanliness of their immediate environment. On September 27th, Germany's Federal Administrative Court overruled Munich's city administration in favor of the plaintiff Dieter Janecek in a case where the Munich resident held his local council responsible for the quality of the air he breathes.

Janecek, who lives on the busy Landshuter Allee in the Bavarian capital, began court proceedings against the city of Munich after complaining about the high levels of dust and fuel pollution in the air outside his home on the highly trafficked street. While the court's decision included a clause that the city of Munich must take pollution analysis samples from outside Janecek's apartment before taking the necessary action, the plaintiff hailed the ruling as a complete victory. "Now every affected person across the country can sue for his right to breathe clean air," Janecek said in a statement outside the court in Leipzig.

The court ruling will force local authorities to draw up action plans to provide clean air and be ready to choose from a number of measures in the case of an inhabitant demanding action. These could range from decreasing, diverting or banning traffic from the affected area, to contributing to the inhabitant's healthcare costs from 2005 onwards, depending on the level of pollution and the effect it has had on the environment and people.

The EU passed a law which set a safe and acceptable level of air pollution for all member states in 2005.

The federal ministry of the environment and other conservation organizations praised the ruling.

A nationwide spate of cases against local authorities over the quality of air may force the German government to take its own action against polluters to avoid a slide into environmental litigiousness.

2. **MEPs Divided Over Fuel Quality Law Plans**

A draft EU directive revision aimed at forcing fuel producers to cut life-cycle carbon emissions should not be used to lay down biofuel sustainability criteria, the European parliament's rapporteur on the plans was told in a debate held in the parliament's environment committee. Marea del Pilar Ayuso of the centre-right EPP party, the parliament's biggest, said the revised EU fuel quality directive was the wrong place to decide how biofuels should be produced.
"We are not in favor or against [sustainability criteria] but this is not the right place. We should stick to the subject of the proposal," she told Dorette Corbey, the Dutch socialist who is coordinating the parliament's position on the law. Ms Corbey has proposed including sustainability criteria in the law despite European commission plans to develop them separately.

No MEPs opposed the draft law's central proposal to cut lifecycle fuel emissions by ten per cent over a decade from 2011. But Ms Ayuso, who is coordinating the EPP's position, hinted at less than enthusiastic support, claiming that 85 per cent of emissions come from fuel use rather than production.

After the debate European oil producer trade body Europia issued a statement calling for the idea of the emission reduction target to be "deferred". It has "merits" but could conflict with the EU's carbon emission trading scheme and a revision of the EU biofuels target, Europia said.

But Jos Dings of green transport group T&E called the plan an "ingenious climate measure" and urged MEPs to back it. The requirement would push the market towards the most climate-friendly biofuels and away from the most damaging sources of oil, such as tar sands, he said.

The EPP may also oppose Ms Corbey's plan to re-tighten fuel vapor pressure limits. The European commission has proposed a relaxation to allow more biofuel to be blended into conventional fuel, but Ms Corbey is worried that this will increase production of volatile organic compounds, which lead to ground-level ozone formation. A commission official said the increase would be "very small" and would be captured by other air quality legislation.

3. Voluntary EU Commitments To Reduce Carbon Emissions Called Insufficient

Automakers made minimal progress in 2006 toward meeting voluntary European Union commitments to reduce carbon dioxide emissions, according to a research report published on September 5th. According to the report, European car manufacturers on average reduced new vehicle carbon dioxide emissions by 0.2 percent in 2006, with Japanese and Korean manufacturers achieving 3 percent and 1.8 percent reductions, respectively.

Manufacturing associations from Europe, Japan, and Korea made an agreement with the European Commission in 1998-99 to voluntarily cut within 10 years carbon dioxide emissions from new cars sold in the EU to 140 grams per kilometer (g/km). However, in 2006 emissions on average stood at 160 g/km, according to the report, published by advocacy group Transport & Environment (T&E).

T&E spokesman Aat Peterse said the figures, which are based on sales data and test cycle results, showed that the voluntary commitment to reduce carbon dioxide emissions "wasn't worth the paper it was written on."
According to the T&E report, the average weight of new cars sold in Europe is increasing, and this has undermined attempts to improve fuel efficiency.

Peterse backed proposals by the European Commission to introduce a binding carbon dioxide target of 130 g/km by 2012, but said the mandatory level should be set at 120 g/km. The Commission published the proposals on February 7th, arguing they were necessary because insufficient progress was being made towards the voluntary targets.

"Regulation is needed now more than ever," Peterse said, adding that the prospect of regulation had already resulted in development of new fuel efficiency technologies.

Sigrid de Vries, spokeswoman for the European Automobile Manufacturers Association (known by the French acronym ACEA), disputed claims that insufficient effort had been made to meet the voluntary commitments. "Manufacturers have invested heavily and continue to do so," she said, adding that the voluntary approach "has delivered results."

When agreeing to the voluntary targets with the European Commission, automakers had always intended that fuel efficiency improvements should be accompanied by initiatives on taxation and labeling to influence consumer demand toward lower-emission vehicles, de Vries said. These additional measures "have not materialized," and this should be taken into account when assessing progress, she added.

4. MEPs Demand More CO2 Cuts From Carmakers

The European parliament's environment committee has demanded that carmakers be asked to do more to reduce carbon dioxide emissions from new vehicles. In a non-binding resolution the committee said carmakers should have to reach the EU target of an average 120 grams per kilometer by 2012 through improvements in vehicle technology alone.

In February the European commission proposed asking carmakers to meet just 130g/km through vehicle technology. It said "complementary measures" such as the introduction of tire pressure monitors and increased biofuel use should make up the difference of 10g/km towards the EU target.

MEPs rejected this "integrated approach" to meeting the EU target. They said the EU should still legislate for the complementary measures and backed the 10g/km figure but suggested no deadline for achieving it.

Rapporteur Chris Davies welcomed the result, despite the fact that the committee rejected by a significant majority his plan to allow carmakers until 2015 to meet the tougher target. "This result sends out a strong message to industry, the commission and ministers", he said.
The committee endorsed Mr. Davies's proposals for a new market mechanism for vehicle emission reductions from 2011. Under the system carmakers and importers would pay fines for exceeding interim annual emissions targets or receive tradable credits for beating them.

MEPs said the fines "should be based on the cost of introducing the necessary technological abatement measures" and that the revenue should be invested in research and public transport. The credit trading system should be kept separate from the EU's carbon trading system, they said.

"Some differentiation" of the 120g/km target should be allowed to cater for the wide variation of car types in the EU fleet, the resolution says. It does not specify on what basis the target should be differentiated, only that the mechanism "should not neutralize the incentive to shift towards lower emission vehicles". The auto industry has expressed a preference for differentiating according to vehicle weight, but critics say this reduces the incentive to make lighter cars.

The committee rejected contentious proposals from Mr. Davies to ban cars capable of speeds over 162km/h from 2012, and vehicles emitting more than 240g/km from 2015. But it backed his call for a longer-term 95g/km target for the EU car fleet by 2020.

The resolution will be put to a vote of the full parliament in late October. If MEPs endorse the environment committee's position it will put the parliament on a collision course with the commission and EU governments. EU environment ministers expressed their support for the commission's integrated approach in June.

5. Industry Says EU Emission Standards May Push Carmakers To Brink of Extinction

European car manufacturers are finding it increasingly difficult to meet customer demands for performance whilst meeting European emissions and safety standards, according to a report published on October 9. In The Evolution of The Car, the U.K.-based Society of Motor Manufacturers and Traders says that in 30 years, fuel efficiency and safety standards in modern automobiles have been drastically improved, and that the industry's research and development efforts are continuing to create advances in "sustainability." Such improvements, however, are occurring "despite the challenges that come from an over-complicated regulatory framework and the ever-present threat of heavy handed policy making," the report said.

The manufacturers society argued that, whereas in the past a designer "might first reach for his pencil ... today, it's a book of rules and regulations the size of War and Peace." According to the society, the number of "type approval" regulations--the "bundles of rules" that define the template for a new car coming to market--has increased 37 percent in the last 20 years, from 62 in 1996 to 85 today.

The report noted that some rules, including limits for exhaust pollutants in engine standards, have "helped focus investment in engine and exhaust technology to reduce harmful emissions,"
just as safety rules have reduced road fatalities. But, the report said, "these rules have consequences in other areas," like pollution abatement technology and safety systems, which have created heavier, less aerodynamic cars. "[E]xperts have engineered more than 98 percent of air quality pollutants like NOx [nitrogen oxides], carbon dioxide and hydrocarbons from tailpipe emissions in the last thirty years," the report said. "[I]ts reasonable for regulators to impose ever tighter limits in a spiral of diminishing returns at ever greater cost to manufacturers?"

According to the report, the cost of meeting carbon dioxide reduction targets could add some [Euros] 3,650 ($5,160) to the price of a new car. "[T]he [car] industry is not a soft target," the report said. "The heavy hand of regulation could drive more car makers towards the brink of extinction rather than to a bright and more sustainable future."

6. **Contradictions Seen Between Science And EU Policy On Air Pollution**

There is a "mismatch" between scientific knowledge and the EU political agenda on particulate matter according to a report by Annesi-Maesano et al. in the European Respiratory Society (ERS) journal.

Particulates – also referred to as particulate matter (PM), aerosols or fine particles – are tiny particles of solid or liquid suspended in a gas, and are usually defined by the size of the particles, recalls the September paper. PM is of "significant importance" as this research means that there is now "clear scientific evidence" of their negative impact on health, including links with "increased mortality" (cardiopulmonary problems and lung cancer) and "reduced life expectancy". Moreover, the ERS researchers have identified "clear signs" of other health effects of exposure to PM, including increased risk of strokes and pulmonary affections, as well as "sudden cardiac death and infarction".

Thus, reducing exposure to PM brings "significant health benefits", finds the research – including life expectancy gains for the average 30 year old of between one month and two years.

The authors believe that the benefits of "stringent" air pollution legislation thus "clearly outweigh the costs", despite the "major resources" required. Thus the ERS calls for "ambitious" air quality strategies and reduction programs in Europe.

They fear that the European Parliament's proposed target of 20 µg/m³ might not be enough to "efficiently protect public health" as "significant adverse effects" have been recorded even at this level. Moreover, allowing member states to exclude natural sources of PM as the Commission has proposed "no longer reflects the true exposure to particles" and the practice must be stopped, they add.
The researchers conclude that plans to reduce exposure to PM in the proposed Air Quality Directive must be "legally binding" if they are to reach their full potential and "stimulate ambitious policies in the member states". Delaying the enforcement of ambient air quality limit values would "weaken EU credibility", they add.

7. Oxford Said To Be Choking On Pollution

Green campaigners have accused the council of dragging its heels over a study into how to slash pollution in the heart of Oxford. It comes as thousands more cars clog Oxford's streets as the 'school run' returns in earnest. And figures show that it is not only congestion which rises, compared to the quieter summer months. So do levels of poisonous gases - which exceed levels set by the European Union.

Tony Payne, Oxford City Council's environmental protection team manager, said: "You can calculate emissions from vehicle flows. On a day with more vehicles, clearly there will be more emissions. Traffic congestion exacerbates that."

The stark contrast has renewed calls for a ban on ageing, pollutant and fume-belching vehicles in the city centre. It has thrown calls for a Low Emission Zone (LEZ) back into the spotlight, but the council has been accused of brushing the idea under the carpet.

Statistics show city traffic levels increase by up to 17 per cent per cent in September, compared to August. Meanwhile, levels of nitrogen dioxide - which can spark respiratory problems - can rise by anything between 10 to 30 per cent. This is against a backdrop of a city that is still failing to meet European air quality standards. The last recorded yearly figure showed 40 of the 60 nitrogen dioxide testing sites in central Oxford failed to meet targets.

The top option for cleaning the city's air is a LEZ - which could see all but the greenest vehicles banned from the heart of the city. Local Green party leader Craig Simmons said: "We have been calling for the city centre to become a Low Emission Zone - where you ban all vehicles that don't meet certain standard air quality targets - like old buses that push out fumes."

But Mr. Simmons said action on an LEZ was taking too long. He said: "It's being brushed under the carpet, but improving air quality is important. There is a legal requirement to improve air quality and it's not being taken seriously." He believes the county council needs to invest more in its safe routes to school plans.

Mr. Payne pointed out the impact on air quality in the city was also dependent on weather and physical location. He said: "If you have a period of still, stable weather conditions, there's not much wind about to disperse the pollutants. When it's windy the pollutants are dispersed. The more open the location, the easier the dispersion. In St Aldates, with tall buildings, the pollutants are more likely to be trapped."
Last year there was a 23 per cent increase at one station in the city from 52 micrograms per cubic meter of air in August up to 64 micrograms in September. At some other stations it was up to 30 per cent and the council expects the figures to be similar this year.

A feasibility study into a clean hub, commissioned by the city and county councils in April last year, is still being carried out - results are due later this year.

As part of LEZ plans for London, from 2008 diesel-engined lorries, coaches and buses would have to meet a minimum standard, with a range of penalties for those who ignore the rule.

Nitrogen dioxide is one of the most prominent air pollutants and can cause respiratory problems and irritation to the throat, nose and eyes. People with asthma are particularly badly affected. The main source of the gas is vehicle emissions - estimated to account for 80 per cent of measured levels.

Nitrogen dioxide levels, in Oxford, are monitored continuously at three city centre locations and at a further network of 60 central sites, including curbside, intermediate and background locations. Tests at those 60 locations have shown that Oxford has failed consistently to meet Air Quality Standards at about two thirds of the sites. At several sites the annual average Nitrogen Dioxide levels have been more than twice the air quality standard of 40 micrograms per cubic meter of air.

Top Five Sites

Queen Street - 101;
High Street -100;
St Clements Street - 87;
Frideswide Square (Bus Stop) -87;
High Street (Covered Market) -83.

Other Parts of the City:

Abingdon Road (Weirs Lane) -52;
Green Road Roundabout: - 65;
Ifley Road (Boundary Brook Road) - 48;
Parks Road (Science Library) - 46;
Botley Road - 42.

Air Quality target set by the European Union: 40

8. Company Cars Face New Pollution Tax
Changes to the taxation of company cars across Europe mean businesses with high CO2 emission vehicles in their fleet will face higher costs, increasing demand for low emission vehicles. And a new study from professional services firm Deloitte says the UK is leading the way in targeting the carbon footprint of company car fleets.

From April 2008, tax relief on company cars is expected to move to an emission basis, with 120g/km (grams of carbon dioxide per kilometer) and 165g/km becoming key benchmarks. At present, the average carbon output for a company car in the UK is around 170-180g/km. And with a typical company car contract lasting three years, employees making decisions now about which car to drive could burden themselves and their employer with increased tax from next year if they choose a high emission vehicle.

Ian Stone, global employer services partner at Deloitte Cardiff, said, “In 2002, taxation of employees’ company car benefit changed to an emissions basis and the percentage of diesel cars sold increased from around 20% to over 60%. “We expect the proposed changes to tax relief on company cars to have a similar impact with demand for sub-165g/km vehicles increasing significantly. Manufacturers need to respond to the impending tax changes so their cars meet the new requirements of fleet managers.

“In the long term, manufacturers will respond by producing cleaner engines using alternative fuels. However, in the short term, we expect a change in the composition of major fleets to include more low emission vehicles. This may have a significant impact on the mix of vehicles manufacturers sell.”

In addition, the Government has raised vehicle excise duty for cars with high CO2 emissions. As a result, businesses with high emission vehicles in their fleet face losing a significant amount from their resale value. The Government is also likely to introduce measures discouraging employee car ownership schemes bringing more people back into company car schemes.

If these changes are implemented, Deloitte expects the fleet market to start changing along the following lines:

- Companies will bring tax into their calculations of whole life costs of cars demonstrating the increasingly expensive nature of high emission vehicles;
- User chooser fleets will become more restricted as very high emission cars come off the fleet;
- Companies will move away from employee car ownership schemes.

9. **Europe’s Shipping Lanes Causing Serious Air Pollution Over Land**

The cargo and passenger ships crowding North Sea lanes are fouling the air above land with health-threatening pollutants, according to a new Dutch environmental study. As European regulators impose controls on industry, motor traffic and refineries, too little attention is being
paid to pollution from ships at sea, the study by the National Environmental Assessment Agency found.

Cleaner fuels, newer engines and quayside electricity points for berthed ships could significantly reduce pollution-related deaths, said the study. Enforcing controls on shipping will be the most cost-effective way to cut air pollution over the next dozen years, it said.

"The message is that if you want to improve air quality on land, you will have a larger effect from spending one euro on the sea than you will from one euro on land," said Pieter Hammingh, a co-author of the report.

The report said chemicals emitted from ships’ diesel engines reach far inland, dirtying the air over nearly the entire country, not just over coastal areas. Rotterdam, Europe’s largest port, hosts 35,000 vessels a year. A major North Sea shipping lane runs 40 kilometers (25 miles) from the Dutch coast — no barrier for some air particles that easily can travel up to 1,000 kilometers (600 miles).

Other studies have found all North Sea countries to be similarly vulnerable to shipping pollution, Hammingh said.

Emissions from ships contribute 20 percent of sulfur dioxide pollution, 20 percent of nitrogen oxide and 10 percent of particulate matter, a mix of small particles or droplets of dust, metals, acids and chemicals. But the addition of more ships and controls on land-based emissions will mean that shipping’s contribution as a percentage of all air pollution will steadily grow.

Controls on the sulfur content of shipping fuel that go into effect in November will reduce emissions 8 percent by 2020. But without further action, nitrogen oxide will increase by 45 percent, and air particles will go up by 35 percent, according to the report. One of the most effective steps would be to provide docked ships with electrical power from the shore so they need not run their diesel engines, the report said.

10. **Government Extends Tax Incentives For 'Euro V' Low Emission Buses And Lorries**

The Department for Transport has announced the details of a scheme to extend tax incentives to encourage haulers and bus operators to buy vehicles that meet the latest European standard for air pollutant emissions, known as 'Euro V', before it becomes mandatory. The incentive will help to improve air quality by encouraging the early uptake of more environmentally friendly, low emission buses and lorries.

The Reduced Pollution Certificate (RPC) scheme will be extended so that haulers and bus operators first registering a Euro V compliant vehicle before 1 October 2009 can claim a discount of up to £500 a year on Vehicle Excise Duty (VED). A vehicle will only be eligible for the discount if it meets the Euro V emissions standard and is fitted with the onboard diagnostic
systems and torque control mechanisms that check and control emissions of nitrogen oxides. This will ensure the Euro V standard is maintained throughout the life of the vehicle.

11. **UK Government Puts £20m Into New 'Green' Vehicles**

The UK government has announced that it will give extra funding to support research for new low carbon vehicles in the UK. It is hoped the new £20 million cash injection will help develop vehicles that could be on the road in the next five to seven years. The money, which was made available by the Technology Strategy Board and the Department for Transport, is part of the government's Low Carbon Transport Innovation Strategy (LCTIS) The LCTIS and the new investment should help the government meet its target of dropping vehicle emissions, which currently make up 20 per cent of all UK emissions, as well as meeting demand for EU carbon emission standards for new cars.

The government's new funding has come after car manufacturers underlined their 'green' credentials at the Frankfurt Motor Show. Several EU manufacturers such as Saab, Citroen and Mercedes all displayed eco-friendly vehicles at the event.

12. **Liberal Democrats Plan To Scrap Petrol And Diesel Cars By 2040**

The Liberal Democrats have committed themselves to phasing out new petrol and diesel cars by 2040 as part of ambitious plans for a zero carbon Britain. The party's environment spokesman, Chris Huhne, was set to make the pledge in his speech to the party conference. Mr. Huhne was expected to say the issue of climate change was now so pressing that radical action was needed - and needed soon.

The Lib Dems are calling for a big increase in car tax on vehicles such as 4x4s, to £2000 a year. Smaller, less polluting cars would pay no vehicle excise duty.

But the party's plan would see car manufacturers told to stop making petrol and diesel vehicles by 2040 using alternative technologies such as electric batteries. In addition, he was set to call for huge investment in the railways, paid for by motorway tolls for lorries and the increased use of green taxes to help cut pollution.

13. **Finland To Ratchet Up Tax On High-Emission Cars**

Finnish motorists who own high-consumption cars are to face a tax hike, the Finnish Broadcasting Company (YLE) has reported. According to YLE, the government's motor vehicle tax working group has come up with a proposal based on carbon dioxide emissions.

Cars registered after 2001 are to be taxed according to their carbon dioxide emissions, whereas owners of cars registered before 2001 are to pay according to their vehicle's curb weight.
However, the taxation of a car emitting less than 180 grams of carbon dioxide a kilometer would not rise. In practice, the threshold amount of CO2 is emitted by a petrol-fuelled vehicle that burns 7.5 liters of fuel to cover to cover 100 kilometers on a combined cycle.

The new tax would be introduced after a transition period, possibly in 2010, and amount to 80-160 Euros a year.

The proposal was drafted in a working group comprising representatives from several ministries and the Finnish Vehicle Administration.

14. Helsinki Could Ban Driving On Days Of Poor Air Quality

The Mayor of Helsinki may soon have the authority to ban the use of private cars in central Helsinki on days of very poor air quality. Such a move would require that the content of nitrogen oxides in the air would have been at a high level for several consecutive days, and that a certain level in the air would be exceeded. "Such a situation is very unlikely. It is more typical for air quality to be poor because of nitrogen dioxide for just a few hours", says Helsinki environment inspector Jari Viinanen.

Helsinki has drawn up guidelines for sudden spikes in pollution. The most stringent measures are reserved for situations in which nitrogen oxides resulting from transport emissions reach a high level. Especially in wintertime there can be large amounts of nitrogen dioxide in the air, if cold air is trapped underneath a layer of warmer air hovering above, and the emissions do not have a chance to dissipate. In such situations, heart patients, asthma patients, and small children can suffer symptoms.

In the new contingency plan, street dust and smoke are also taken into consideration. There are high levels of street dust in the air especially in springtime, when the content of airborne particles often exceeds the maximum acceptable levels. If there is too much street dust in the air, the streets are sprayed with a mild saline solution which can keep the streets damp for several weeks. However, no restrictions on traffic are planned for dust.

15. London Roads Breach Pollution Limit

Nine sites in London have exceeded the European Union's (EU) legal limit for air pollution, a report by the Green Party at the London Assembly has said. Horn Lane in Ealing, west London, is the most polluted place with 133 bad air days followed by Vauxhall Cross in Lambeth, with 129 bad air days. The EU allows every place to have only 35 bad air days a year.

The poor air quality is responsible for the premature deaths of about 1,000 Londoners a year, the report said.
The EU is currently investigating the level of particulate matter (PM10) - fine sooty particles found in exhaust fumes of cars - in the UK and particularly London, the Green Party said. If no action is taken the EU will first formally warn the UK’s government and finally the government could be taken to court and fined.

The EU's legal limit for air pollution came into effect in 2005.

The Green Party's report comes months after the EU formally warned the government about the level of sulfur dioxide in the air, which was not breached in London. In 2000, only one place breached the bad air days limit but last year 11 sites failed to meet the EU standards.

London's Most Polluted Sites
1. Horn Lane, Ealing - 133
2. Vauxhall Cross, Lambeth - 129
3. Erith, Bexley - 108
4. Neasden Lane, Brent - 100
5. Marylebone Road, Baker Street - 84
6. Woolwich flyover, Greenwich - 55
7. Westhorne Avenue, Greenwich - 39
8. Brixton Road, Lambeth - 36
9. North Circular Road, Brent - 36

Baker Street in Marylebone Road has figured on the list every year since 2000.

Darren Johnson, a Green Party member of the London Assembly, said: “The failure of the government and local authorities borders on the criminal and we need the European Commission to take firm action against them. “Whilst I welcome the London Mayor's introduction of a Low Emission Zone to deal with the older, more polluting heavy diesel vehicles, it won't be enough to guarantee the health of Londoners,” he added.

The Low Emission Zone in London, which comes into effect in February 2008, will see heavy polluting vehicles charged for entering London. Mayor Ken Livingstone's office said he "shares the Green Party's concern" and has hence invested millions on public transport and encouraging cycling. A spokesperson said: "Strict new emission controls have been introduced on London buses and taxis and in addition an AirTEXT service was introduced which sends alerts on air quality to Londoners suffering with respiratory conditions."

16. EU Launches Greener Urban Transport Plan

The European commission will issue revised proposals on public procurement of clean vehicles before the end of the year as part of a new drive to promote sustainable urban transport. The move was confirmed in new green paper on urban mobility adopted recently by the commission.
The commission tabled legislative proposals in 2005 that would have required public authorities to ensure that at least 25 per cent of heavy vehicles purchased met an EU "enhanced environmentally friendly" standard. The plans were withdrawn after being criticized by MEPs and haulers for being too weak.

EU transport commissioner Jacques Barrot has previously said the new proposals will be extended to cover all vehicles. The new green paper hinted that the revised plans will also compel authorities to consider life-cycle energy consumption and carbon dioxide and pollutant emissions as criteria in future procurement decisions. "Public procurement could give preference to new Euro standards", it added.

Green mobility campaign group T&E welcomed the commission's intention to issue improved proposals on the issue, adding that "today's paper offers nothing in the way of concrete targets or real strategy".

The green paper suggests several other options for greening urban transport. These include providing economic incentives to develop alternative fuels infrastructure and clean technologies, promoting eco-driving, and developing harmonized EU rules for urban green zones, based on pedestrianisation, restricted access and urban charging schemes.

A public consultation on the green paper will run until March 2008, with the results feeding into an EU action plan on urban mobility which the commission will adopt next autumn. The green paper says that every action identified in next year's plan will include a "timeline for implementation and the allocation of responsibilities for the various actors".

17.  **French Study Links Particulate Matter In Urban Air to Increased Health Risks**

A 25 percent reduction in urban air pollution concentrations could drastically reduce premature deaths and hospitalizations, according to a study released on September 11th by the French National Institute for Public Health Surveillance (InVS). The study, Health Impact Assessment of Urban Air Pollution--Area of Dijon Short and Long-term Impacts, carried out by government researchers, assessed the health impacts of exposure to urban air pollutants among residents of the central French city of Dijon.

Researchers assessed average exposure to sulfur dioxide, nitrogen dioxide, ozone, and small particles (PM-10) and then extrapolated health impacts across the region, which is home to 190,000 people. The results show that air pollution contributed to premature deaths of 24 residents of the survey area, including seven deaths from cardiovascular disorders and two from respiratory disorders.

Air pollution was the principal cause of an estimated 95 hospitalizations linked to cardiovascular disorders, including 19 for cardiovascular diseases, as well as eight hospitalizations for respiratory reasons in adults aged 65 years and over, according to the study.
A 25 percent decrease in contaminant levels would help avoid more than one-third of the premature deaths and hospitalizations attributable to air pollution, while a major long-term reduction in small particle levels could help avoid most of the deaths, according to the study.

InVS, a government agency charged with monitoring various health risks, warned that the results "have to be interpreted with care, because of the limits of the method" used. The institute insisted, however, that air pollution "has an important health impact, even in a city like Dijon, where target values are mostly respected."

Reducing air pollution can have a significant impact in terms of mortality, InVS said, with reductions "at the source" in common pollutant emissions "the most efficient measure" that can be taken.

InVS encouraged policymakers to take preventive action to reduce problematic air pollution conditions like ozone, which develop under specific conditions, rather than only taking action "when atmospheric pollution exceeds the standard levels."

18. EU Turns To Info Technology To Cut Car Emissions

The European commission will next summer issue a plan to increase use of information and communication technologies (ICTs) in order to help further reduce carbon emissions from road transport. The announcement was made as part of a series of initiatives to make cars safer and greener. It coincides with the EU's sixth annual mobility week, whose theme is "streets for people".

Based on the recommendations of a working group and stakeholder input, the plan will identify the most effective technologies to reduce road transport emissions. Technologies such as adaptive cruise control could cut fuel consumption by three per cent, the commission said.

The plan will be published as part of the commission's intelligent transport system deployment roadmap, itself announced last year in the mid-term review of the EU's 2001 transport white paper.

19. MEPs Set To Clash With Ministers Over Air Quality

The European parliament's environment committee set the assembly on a collision course with governments when it voted to amend a ministerial compromise position reached last year. MEPs opted for tighter limits on fine particulate pollution and longer implementation deadlines than wanted by ministers.

The committee backed rapporteur Holger Krahmer's second-reading recommendation to impose a binding limit of 20 micrograms per cubic meter (µg/m3) on particulates less than 2.5 microns
in diameter (PM2.5), to be met by 2015. Ministers want a 25 ug/m3 limit. The PM2.5 limit was one of the focal points of debate in the parliament's second reading.

Mr. Krahmer also convinced MEPs that member states should have an extra two years to meet particulates limits in difficult areas. Governments must demonstrate they have made all efforts to comply, he stressed. The two years would be given on top of a three-year extension already backed by ministers, and would also apply to PM10.

"The vote today is a great success," said Mr. Krahmer, a German liberal. "The limit values for [particulates] are more ambitious than the proposals of council and commission. Member states will have the necessary flexibility in implementing the directive."

MEPs voted to bring down an annual limit on PM10 from 40 to 33 ug/m3 by 2010. When the directive is reviewed the European commission should consider removing the PM10 limits altogether, the committee said, since limits on PM2.5 have the effect of limiting the coarser particulates.

Several other amendments tended to dilute the position adopted by ministers. The environment committee backed the weakening of a requirement for national authorities to cut the average exposure of populations to PM2.5. It also exempted more areas from particulate matter limits.

On the other hand, new evidence led MEPs to call for special measures to protect children from air pollution. Campaign group EEB condemned the apparent improvements as "too weak" and criticized the increased flexibility and number of exemptions.

The Environment Committee's positions on the dossiers are subject to approval by the full European Parliament, which must then negotiate the details with EU member states meeting in the EU Council before the legislation is finally approved.

20. **Substantial Drop In EU Road Fuel Sulfur Levels**

The sulfur content of road fuels sold in the EU declined substantially in 2005, according to figures published by the European commission. The findings were presented in the commission's latest report on implementation of the EU's 1998 fuel quality directive. Under the directive member states were obliged to reduce the sulfur content of petrol and diesel fuels to 50 parts per million (ppm) by 2005. They must
then cut this level to less than 10ppm ("sulfur-free") by 2009. A controversial revision of the law that would introduce a carbon saving requirement is underway.

The report shows that all member states complied with the 2005 limits except Poland and Malta, where sulfur levels were above 50ppm in petrol. Across the EU in that year sulfur levels averaged 19ppm in petrol and 25ppm in diesel, a significant drop compared with 2004. They remained higher in new member states.

Meanwhile more member states switched to using sulfur-free fuels ahead of the 2009 deadline. The average sulfur content of petrol and diesel in Denmark, Finland, Germany and Sweden was already below the limit in 2005. Austria, Hungary, the Netherlands and Slovakia had also met the limit for either petrol or diesel.

21. Russian Low-Grade Diesel Fails to Satisfy EU Standards

Russia will fail to meet new European Union standards for lower sulfur content in diesel from 2008 and will face a further price decline for the low quality product, executives and traders said. Philipp Nikonov, vice president at Transnefteprodukt, which ships around 18 million tons of diesel via Latvia's Ventspils on the Baltic Sea and Black Sea ports, said Friday that Russian refiners were not ready for the change. "We won't be able to switch from January 1st, that is 100 percent sure," said Nikonov, adding that his firm could not impose sanctions on companies that ship low-quality diesel.

"This will simply halt our flows. Transnefteprodukt will be paralyzed and the shareholders will ask me why I'm losing revenues," he said.

New EU standards will halve the sulfur allowed in diesel for heating needs to 1,000 parts per million or 0.1 percent, while Transnefteprodukt exports 2,000 ppm diesel.

"We have done research and discovered that the premium for the 1,000 ppm product versus 2,000 ppm is around $6 per ton in Europe. It seems that it is not enough for the companies to start an expensive technological switch," Nikonov said.

Russian firms also export over 20 million tons of higher quality diesel, including as motor fuels, by railways. Traders expect Russian 2,000 ppm diesel to end up at Europe's refineries for deeper processing blending with higher quality grades for heating needs.

"The problem is that it is not clear whether there is free desulfurization processing capacity in Europe," a Russian diesel exporter said. "I suspect they are already running at full capacity on our own product, which is turned into Euro Standard motor fuels," he said.

22. EU Wants to Make Freight Smoother, Greener
The European Union should overhaul its freight transport system by reducing bureaucracy and promoting rail and river networks to make the industry more environmentally friendly, the EU executive said, laying out a set of proposals aimed at increasing the efficiency of freight while cutting costs and improving services across several different transport modes.

It called for a European rail network that would prioritize freight as well as measures to prepare ports for increasing demand and the need to reduce greenhouse gas emissions.

Transport Commissioner Jacques Barrot told a news conference he favored creating a single maritime area within the 27-nation bloc, which would do away with repetitive customs checks at ports. Satellite technologies would help track shipping to ensure vessels do not leave EU waters before checking in at another European port, making it easier to skip customs controls.

He also said paperwork should be reduced so goods can move more freely and called for streamlining of rules in different countries about the length and weight of trains that are allowed to pass through national borders.

The volume of goods transported in Europe is expected to increase by 50 percent between 2000 and 2020, the Commission said, highlighting the need to reduce congestion and tackle emissions blamed for contributing to climate change.

23. **Portuguese Budget Promises Greener Car Taxation**

Portugal's 2008 budget will further green national vehicle taxation, according to recently published government plans. The proportion of a vehicle purchase tax that is calculated on the basis of carbon dioxide emissions will rise from 30 to 60 per cent from January. And a combination of purchase tax relief amounting to €64m and a rise of €23m in emission-based circulation taxes will prompt a shift from diesel to petrol and hybrid cars, the government says.

Other fiscal measures include an extra €30 million relief on biofuels duty and a tax rebate on income from electricity micro-generation already promised in separate legislation. Urban and industrial waste management and wastewater treatment will dominate environment ministry spending in 2008.

24. **Bosch Sees Scant Europe Demand for Hybrid Vehicles**

Robert Bosch GmbH, the world's largest automotive parts supplier, expects potential growth markets for hybrid drive trains to be concentrated in NAFTA countries and Japan. "For 2015, Bosch forecasts that hybrid vehicles will account for 4 percent of production in the NAFTA countries and 9 percent in Japan," it said in a statement. The comparative figure for Europe is relatively low, according to the company, with mild and full hybrids accounting for just 1 percent of production.
Whereas full hybrids such as Toyota Motor Corp’s Prius can drive short distances purely on electrical power, cars using mild hybrids require the internal combustion engine to drive the vehicle at all times.

Bosch said it has been working on hybrid technologies for over 30 years and has its first orders for both gasoline as well as diesel hybrids.

25. **British Report Calls for National Marine Agency**

A British parliamentary committee has called for creation of a national marine science agency to take responsibility for all aspects of the use and conservation of the seas in the light of global warming. The report, Investigating the Oceans, from the all-party Science and Technology Committee said the new overarching agency should supersede the current inter-agency coordinating committee and greatly broaden its scope.

"The UK has the capacity to be a world leader in key aspects of marine science, such as coastal work which is vitally important because of climate change," said committee chairman Phil Willis. "But if we are to achieve this, the UK needs a properly funded and coordinated marine agency. It also desperately needs a strategy both for science and for wider maritime issues to ensure effective co-ordination of priorities and activities."

The report said the agency should co-ordinate marine science throughout Britain, promote marine science education, engage with industry and smooth British involvement in international organizations. It said the agency should also co-ordinate ocean monitoring and observations, particularly in view of the climate crisis.

The report, which attacks the government’s record on marine conservation and planning, comes as the government ends public consultations on a draft Marine Bill which should be presented to parliament early next year.

The consultation document launched last late year proposed a strategic marine planning system to set national objectives and priorities for offshore developments.

It also aims to speed up the marine licensing process and create a new oversight body, the Marine Management Organization, to ensure that proposals for wind and wave power developments are in the right place and do not threaten wildlife.

"We need to take a strategic approach across the whole UK so that all our seas are afforded the same protection," said Jonathan Shaw, minister of state for marine, landscape and rural affairs.

"It is important that we get it right, so that future generations will continue to benefit from a clean, healthy and productive marine environment," he added in a statement.
A spokeswoman for the parliamentary committee said there was no duplication between the two oversight bodies as the proposed maritime agency would have a far wider remit than the Marine Management Organization.

26. EU Losing Patience With IMO Over Ship Pollution

The European commission has given the strongest indication yet that it is losing faith in the ability of the International maritime organization (IMO) to curb air pollution from ships. "Time is running out and we are running out of patience," environment directorate chief Mogens Peter Carl told a shipping conference in Brussels. He was referring to efforts in the UN-sponsored body to cut three "classical pollutants": particulate matter, nitrogen oxides and sulfur dioxide. "If the IMO does not move successfully within a few months, the pressure on the commission to come forward with proposals for unilateral action will be such that we have to prepare such proposals," Mr. Carl warned.

Turning to efforts to cut carbon dioxide from shipping, Mr. Carl said there was still no sign of binding measures to cut emissions ten years after the UN had given the IMO responsibility for developing these. "Should IMO not agree binding reductions by 2009, [the environment directorate] will try to persuade the European commission to propose measures. An obvious one is to include [shipping] in the EU's emission trading scheme." Earlier commission statements had suggested these proposals might come even sooner.

Portuguese junior environment minister Humberto Rosa, representing the EU presidency, said member states were in less of a hurry to take action outside the IMO. "The IMO seems to be moving on the classical pollutants," said Mr. Rosa. The EU should await the outcome of a review of air pollution under the IMO's Marpol convention, he urged. The review is due to end by April 2008 but could be delayed.

Mr. Rosa acknowledged that "not much" had been achieved by the IMO on CO2. It was "very likely" that maritime emissions would be subject to trading in some form in future, he said. Ministers have no clear policy on the issue yet, he said.

The conference was jointly organized by green transport NGO T&E, the German environment ministry, the Portuguese presidency, and the International Council for Clean Transport.

27. EU to Tackle Ship Emissions, Fisheries Through Coordinated Policy on Oceans

On October 10th, the European Commission promised to more effectively and sustainably manage Europe's oceans through an integrated maritime policy that includes a number of environmental elements. Speaking to journalists, European Commissioner for Fisheries and Maritime Affairs Joe Borg said the policy would be a "broad, long-term, and comprehensive approach to maritime affairs" and would help tackle problems such as declining fish stocks and greenhouse gas emissions from ships.
In a strategy document describing the policy, the Commission noted that the European Union is "at a crossroads" in its relationship with the oceans because of increasing exploitation of maritime resources and accompanying deterioration of the marine environment. Because of this, a "coherent policy framework that will allow for the optimal development of all sea-related activities in a sustainable manner" is needed, according to the strategy document.

The Commission strategy document brings together a number of existing initiatives and says that maritime policy will be based on closer cooperation between a number of policy functions with an impact on the marine environment, such as energy, transport, and research.

The Commission will establish a "coordinated decision-making process" covering these sectoral policies, according to Borg. Existing environmental measures that will be brought under this umbrella include the Marine Strategy Directive and initiatives on ship dismantling and carbon capture and storage.

A proposal for a Marine Strategy Directive, which will require EU member states to draft marine environment protection plans aimed at ensuring "good environmental status" by 2021, was published by the Commission in October 2005 and is under discussion in the European Parliament.

The Commission opened a consultation on the environmental and health impacts of shipbreaking on May 22.

On carbon capture and storage, the Commission will propose "an enabling legal framework" by the end of 2007 including details of carbon storage in sub-sea formations, according to the maritime strategy paper.

New elements in the paper include an undertaking to revise rules on use of shore-side electricity by ships in port. Vessels at berth often keep their engines running rather than plugging into shore-side electricity because electricity taxation rates mean it is often more expensive than bunker fuel, Borg said. The Commission will therefore set out measures to give tax exemptions to ships as an incentive to switch to shore-side power.

In addition, the Commission said it would propose in 2008 measures to eliminate destructive fishing practices, such as discards of unwanted fish and by-catch--the incidental capture of non-target fish.

These will supplement an EU strategy to minimize the damage done to marine ecosystems by bottom fishing, which is due for publication on October 17th.

On emissions from ships, the Commission said it would continue to participate in International Maritime Organization discussions on a global framework to control emissions, but if "the results are insufficient [the Commission] will consider alternative proposals for action." Borg said
reduction of carbon dioxide emissions from ships "has to be pushed forward through the relevant international fora."

28. **Environment Committee Firm On Marine Strategy Law**

Member states must ensure their seas meet legally binding "good environmental status" criteria by 2017, according to the European parliament's environment committee. The second reading vote on an EU framework marine environment directive defies ministerial insistence on a non-binding aspirational goal by 2021. MEPs backed anew many suggestions from their first reading to substantially strengthen the directive. They called for a network of marine protected areas to be set up by 2012 and for the Baltic Sea to be a pilot area for implementing the new directive.

Member states that share marine zones must develop regional action plans to tackle pollution, they said, and the European commission should have more power to scrutinize the measures proposed. In their amendments MEPs did reflect member state concerns that measures to tackle marine pollution should be subject to a cost-benefit analysis.

Greenpeace accused the committee of succumbing to industry pressure by scrapping references in the definition of "good environmental status" to halting oil releases from drilling platforms and eliminating pollution from shipping.

29. **Kyoto Successor "Can Include Aviation, Shipping"**

There are "no genuine technical obstacles" to including greenhouse gas emissions from international aviation and shipping in a global climate change agreement after 2012, according to the European environment agency (EEA). The conclusion came from a workshop organized with the Norwegian government in Oslo. Aviation and shipping emissions were left out of the Kyoto climate protocol in 1997; emission reduction efforts for these sectors have continued under separate UN regulatory bodies. The EU has been unhappy with progress and pushed for their inclusion in a Kyoto successor.

The first commitment period of the Kyoto Protocol sets outs cuts in emissions of certain gases by 2012, after which new commitments are needed. Emissions from international aviation and shipping are the fastest growing source of greenhouse gases. EU carbon dioxide emissions from international aviation and navigation have increased by 96 % and 50 %, respectively, between 1990 and 2005. However, both sectors are exempt from the Kyoto Protocol.

Developed countries are instead requested to work through two UN bodies, the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO) to limit emissions from these sectors. The ICAO and the IMO have had little success in cutting emissions from the two sectors and there has been a great deal of debate surrounding their exclusion from the Kyoto Protocol.
The Oslo workshop, co-organized by the Norwegian government and EEA, focused on identifying potential technical obstacles to including international aviation and shipping from future international commitments to limit climate change. The workshop found that no genuine technical obstacles existed that could not be solved.

'If we are going to meet the long term targets of minimizing global warming to a maximum of two degrees Celsius, emissions from international aviation and shipping have to be included in future international agreements like those from all other sectors,' said Jeff Huntington, head of the environmental assessment program at the EEA.

30. EU Attacks ICAO Over Aviation Emissions

The European commission expressed dismay at the lack of a clear international agreement on how to cut greenhouse gas emissions from aviation. Speaking at the end of a triennial two-week meeting of the International civil aviation organization (ICAO) in Montreal, Canada, European representative Luis Fonseca de Almeida, said, "We are disappointed by the outcome and believe ICAO has abdicated the leadership role given to it in the Kyoto protocol."

"[ICAO's] record on aircraft emissions is simply not good enough," concurred EU transport commissioner Jacques Barrot.

ICAO, a UN body, was given responsibility for reducing emissions from international aviation under the 1997 Kyoto protocol. In a press release the organization described itself as committing to "aggressive action" on aircraft emissions.

The meeting agreed to create a new high-level group made up of senior government officials to devise strategies and measures for countries to cut airline emissions. As expected, it did not endorse unilateral inclusion by the EU of foreign airlines in its emission trading scheme. The EU confirmed it would go ahead without ICAO approval.

Airlines, represented by the International air transport association (IATA), "applauded" ICAO's efforts, but criticized Europe's emission trading push. "It is disappointing and irresponsible," said Giovanni Bisignani, IATA's director general, "regional schemes will have, at best, limited impact on the environment." He also said the EU's plans were illegal.

Meanwhile, the EU said it was disappointed a majority of delegates had refused to sign up to "meaningful targets to reduce aviation emissions". ICAO's new high-level climate group has no clear mandate to fix such targets or a delivery timetable, it added.

An EU source said the bloc is starting to question whether ICAO is the best forum to tackle airline emissions. "Certainly it increases the arguments for a revisiting of ICAO's role." International aviation and shipping could be treated differently under a new post-2012 climate agreement.
Transport NGO T&E was clear in its verdict, "After a shameful decade of obstruction and inaction ICAO must now be stripped of its environmental responsibilities," said aviation specialist Joao Vieira.

31. EU Parliament Panel Wants Aviation Brought Into European Trading Bloc by 2010

On October 2nd, the European Parliament's Environment Committee voted to strengthen a European Commission proposal to include the aviation sector in the EU's Emissions Trading Scheme. The committee endorsed changes to the Commission proposal that would bring forward the date from which aviation emissions are included in the EU trading scheme and impose tougher emissions limits. The vote was 50 in favor, with one abstention.

The changes were included in a draft report from Peter Liese, a German center-right Member of the European Parliament. Under the plan favored by the Environment Committee, all flights within the European Union, or entering or departing the European Union, would be included in the emissions trading scheme by 2010.

This contrasts with the Commission proposal, published in December 2006, under which intra-European Union flights would be included in the scheme by 2011, while flights between the European Union and other airports would be included starting in 2012.

The Environment Committee also said that carbon permits given to airlines at the start of the scheme should be set at 90 percent of the operators’ average annual emissions during 2004-2006, compared to the Commission’s proposal of 100 percent. Under the committee’s scheme, airlines will have to buy additional allowances on the EU’s Emissions Trading Scheme if they exceed the allowances allocated to them at the outset.

The Liese report argues that flights into and out of the European Union must be part of the trading scheme because "the environmental impact of the scheme will be relatively small if intercontinental flights are not included" and because competition between airlines may be distorted if only some are affected by the rules. However, the United States has signaled opposition to the inclusion of intercontinental flights on the basis that a global approach to managing airline emissions should be developed by the International Civil Aviation Organization (ICAO).

On September 28th, ICAO decided to form a high-level group on emissions and climate change as part of a strategy to reduce airline carbon dioxide emissions, but the European Union criticized the ICAO measures, saying they lacked "meaningful targets".

According to the Liese report, the EU trading scheme should include airlines because aviation is "the worst transport mode" in terms of greenhouse gas emissions. In addition, the report said, including aviation in the European scheme would open the way "step by step to a global
scheme” for emissions trading. “The Commission may propose that incoming flights from third countries are not covered by the [EU] scheme if the third country has a system in place which has at least the same environmental benefit,” the report said.

The Environment Committee also endorsed a number of other modifications to the Commission proposals.

- At least 50 percent of allowances under the EU trading scheme should be auctioned, the committee said, in contrast to the Commission's proposal, which does not dictate what percentage of allowances should be auctioned.

- The committee also deleted a section from the proposal that would exempt government flights from the rules. Government flights should be included because “the public sector and especially politicians need to be a precursor and a good example,” Liese said.

A Parliament spokesman said the full Parliament would vote on the proposal as approved by the Environment Committee at its plenary sitting in Strasbourg, France, November 12-15.

32. Britons Top Table of Carbon Emissions from Planes

Britons are the world's worst offenders when it comes to carbon emissions from air travel, according to figures published by market research company Global TGI. Not only are Britain's average air emissions per adult the highest out of the 20 countries covered at 603 kg per year, they are also a third higher than second-placed Ireland's 434 kg and more than double the 275 kg from third-placed Americans.

"There are clearly a number of reasons for it, some of which include the British weather and people wanting to get away from that, some of which are to do with our being an island,” said spokesman Geoff Wicken.

"But the rapid growth in low-cost flying has undoubtedly been a factor,” he said.

The British government has pledged to cut the country’s carbon emissions as part of the battle against global warming, but it is also backing rapid expansion of air travel.

It has come under relentless pressure from climate campaigners to curb airport expansion and has called for flights to be included in the European Union's Emissions Trading Scheme.

Scientists say carbon emissions from flights are at least twice as harmful to the environment as those at sea level.

However, the road carbon emissions of Britons at 2.4 tons per adult are less than one third of Americans’ 7.5 tons. In fact overall American adults have the biggest annual travel carbon
footprint in the world at 7.8 tons, more than double France's 3.7 tons, which comes in at number two. Third on the list at 3.1 tons is Britain, followed by Ireland on 3.0, Germany on 2.4 and Spain on 2.2 tons.

India is at the foot of the table with an annual travel footprint of just 200 kg per adult, with second-to-bottom China on 500 kg. But TGI warned that travel emissions in those two booming economies were rising rapidly.

It also pointed out that its figures were calculated per adult, meaning it did not provide overall travel emission details of each country. That would be achieved by multiplying the figures by the adult population.

TGI, which carries out research on brand usage and consumer behavior, calculated air emissions by adding up the number of long and short haul flights taken. It arrived at road emissions figures by determining the amount of fuel consumed.

33. **UK Tax Changes Target Planes, All-Business Flights**

Britain aims to boost tax on aviation by 500 million pounds (US$1 billion) a year as it targets planes rather than passengers and doubles taxes on all-business flights crossing the Atlantic. Analysts said tax changes flagged -- but not detailed -- in the government's pre-budget speech are likely to hit airlines flying larger and older planes harder than those with newer, more fuel-efficient fleets.

"The devil will be in the detail of this change in duty, but on the data available we see this as more positive for easyJet than for BA (British Airways)," said equity analyst Peter Caldwell in a Barclays Wealth research note.

"EasyJet tends to operate shorter routes, has high capacity utilization and a very young, hence relatively fuel-efficient, fleet. BA has more of a focus on long-haul and, while it is starting to replace aircraft, it has a mature fleet."

The government said it would do away with its air passenger duty (APD) from November 2009 and replace it with new taxes on airlines based on each plane they fly.

How this is to be calculated will be the subject of a year of consultations between the government and airlines, green groups, passenger organizations and the wider business community.

"We don't know the mechanics of how the new tax will operate," said Neal Weston, head of policy and communications at the British Air Transport Association. "Will it be the age of the aircraft, the engines, the emissions, where it travels? We don't know the methodology."

Basing it partly on a plane's maximum take-off weight -- a standard already used for levying air traffic control charges -- is one possible factor, analysts said.

Plans to replace the APD come less than a year after an unpopular doubling of the duty by Prime Minister Gordon Brown, who was then Chancellor of the Exchequer. The Treasury said the changes are aimed at raising an additional 520 million pounds from the aviation industry from the financial year beginning in April 2010.

APD annual revenues are on track to rise to about 2.3 billion pounds by then, meaning the government's new approach hopes to capture about 2.8 billion pounds per year from aviation, almost triple the intake in 2006.

One loophole which the government said it will close starting in November 2008 affects all-business flights offered by airlines such as MAXjet, Eos and Silverjet. Passengers on such flights will have to pay the higher of two APD rates, meaning it will double to 80 pounds per flight. These airlines also fly older planes which could be subject to stiffer taxes when the APD is replaced in 2009.

"It'll be unhelpful for MAXjet, Silverjet and Eos, bearing in mind that they're at early stages of their development and some of them are not yet profitable," said analyst Wyn Ellis at Numis Securities.

A spokeswoman from Silverjet said the tax change could have a detrimental effect on the airline's environmental initiatives.

"It was a bolt out of the blue. There will be a substantial increase in costs. It will force us to review our environmental policy of offsetting our carbon emissions."

The Geneva-based International Air Transport Association (IATA), representing most of the world's airlines, urged Britain to look at policies rather than taxes to help the environment and consumers. "Whether the tax is collected per plane or per passenger this sort of tax is ineffective in limiting aviation emissions," said an IATA spokesman. He said airlines should be encouraged to invest in new technology while regulators should aim to make airports and flight routing as efficient as possible.

Other measures include emissions trading, the European Union's key tool to fight global warming. A committee of EU lawmakers last week voted to include all airlines flying to, from and within the European Union in the bloc's emissions trading system from 2010, a year earlier than planned.

34. U.K. Announces Shift in Aviation Taxes; New Changes May Simplify Carbon Cost
The aviation industry in the United Kingdom faces a period of tax upheaval following October 9th proposals from Chancellor Alistair Darling to levy duty on flights rather than individual passengers, in a bid "to encourage more efficient use of planes." The new regime, slated to replace the U.K. air passenger duty (APD)--a passenger-based levy charged according to cabin class and distance traveled on flights leaving the U.K.--is expected to come into force on November 1st, 2009.

In media notes detailing the proposals, Her Majesty's Treasury said the government's priority has been to work to include aviation in the European Union emissions trading scheme, "which will help to ensure that the aviation sector plays its part in delivering real carbon reductions across Europe." The notes added that "the Government continues to make good progress on securing this goal."

The finance chief also announced an interim measure to charge APD on single-class business flights at the standard rate from November 1st, 2008. Under existing rules, APD is charged at the reduced rate on the lowest class of travel, such as coach, and at a higher so-called standard rate in business and first class.

According to explanatory notes accompanying the announcement, the standard rate will apply to single-class flights where the seating pitch--or leg room--exceeds 40 inches. Existing tax rules subject the growing number of business class-only flights to APD at the reduced rate.

**35. No Improvement In Austrian Air Quality**

Emissions of particulate matter (PM10) and nitrogen dioxide (NO2) exceeded limit values laid down in EU ambient air quality legislation "numerous" times in 2006, Austria's environmental assessment agency has reported. Average PM10 values broke legal limits at 70 of 111 measuring stations, against 58 last year and 28 the year before. NO2 also continued a rising trend since 2000, with road traffic the main culprit. Ozone levels were "slightly above average" in 2006 and the EU's 2010 target value for ozone was exceeded at 57 per cent of measuring stations.

**36. Norway 'Worst In Europe' For Nitrogen Oxides**

Norway produces the highest per capita emissions of nitrogen oxides (NOx) in Europe, at 42 kilograms annually, according to NGO The Future in Our Hands (FIVH). To meet its commitment to cut NOx emissions by 30 per cent from 1990 levels by 2010 under the Gothenburg protocol, Norway will have to reduce annual emissions by 38,500 tons in just over two years, FIVH claimed. Coastal shipping and the oil industry account for 61 per cent of emissions between them, the group says.
37. UK "Can Cut Car Emissions By 30 Per Cent In 2030"

The UK can achieve a 30 per cent cut in carbon dioxide emissions from road transport by 2030, according to a new report prepared for the country's finance ministry. Author Julia King, a former director at Rolls-Royce, says car emissions per kilometer could be halved by then. But this would be offset by an increase in distance travelled. The reduction can be achieved "at low cost" through a combination of cleaner fuels, new vehicle technology and "smart consumer choices," Ms King says.

38. Dutch Parliament Approves Air Quality Law

The Netherlands' upper parliamentary chamber has backed a comprehensive new air quality law that mandates local authorities to establish remediation programs for air pollution hot-spots. Holland is not on track to meet existing EU particulate matter and nitrogen dioxide targets and will soon face tougher standards. The law sets out how air pollution will be tackled in areas where EU norms are exceeded. It will enter force in spring 2009 but implementation has already begun. New infrastructure developments will be taken into account.

39. EU Launches Proposals To Help Hydrogen Cars

Hydrogen-powered cars stand to benefit from two new proposals launched by the European commission in Brussels. One creates a public-private partnership to drive research into hydrogen power. The other recommends bringing hydrogen cars into the EU's standard vehicle type approval system.

"It [hydrogen technology] will bring us cleaner air and reduce our dependence on fuel imports," said EU industry commissioner Gunter Verheugen. He said the new technology could boost Europe's competitiveness. But hydrogen power does not automatically cut greenhouse gas emissions. "It's only viable insofar as we guarantee hydrogen will not be obtained from fossil energy sources," emphasized Mr. Verheugen.

In any case, he said, the potential for hydrogen to cut car emissions is limited in the near future: "The numbers [of hydrogen cars that will appear] are so negligible it will have no real impact [on greenhouse gas emissions] in the next ten to fifteen years."

The infrastructure problem - there is hardly anywhere to refuel hydrogen cars today - must be solved by the market, not EU funding, added the commissioner.

The research proposal, called the fuel cells and hydrogen joint technology initiative, will develop and demonstrate hydrogen power in applications from cars to mobile phones over the next six years. EU funding of E470m will be matched by a similar industry contribution.
EU research commissioner Janez Potonik estimated the initiative would cut time-to-market by up to five years, with mass production of hydrogen-powered cars starting from 2015 and other products five years earlier. The initiative has been in development for over four years.

The commission's other proposal will complement ongoing research by making it easier to put hydrogen cars on the market. Officials have recommended amending an existing directive on type approval to apply also to hydrogen vehicles.

40. EU And US Remain At Loggerheads Over Climate Change

The US government hailed climate change as one of the "great challenges of our time" at the end of last week, but did not budge in its opposition to globally-set, legally-binding emission reduction targets. "We come together today because we agree that climate change is a real problem - and that human beings are contributing to it," US secretary of state Condoleezza Rice told a US-led international climate meeting "now, it is our responsibility as global leaders to forge a new international consensus on how to address climate change."

This was a promising start to the Washington meeting that brought together the world's 17 largest CO2 emitters; a year ago President George Bush was still questioning the science behind climate change.

But despite the new rhetoric, the US did not budge from its long-held position that technology, not binding emission caps, is the main solution to climate change.

President George Bush called on those present to agree "a long-term goal" to cut emissions by mid-2008, but did not put forward a concrete proposal. Nor did he express support for a global, legally-binding treaty to enforce emission cuts.

"Each nation must decide for itself the right mix of tools and technologies to achieve results that are measurable and environmentally effective," Mr. Bush told delegates. Days before, UN chief Ban Ki-moon had reassured critics the US initiative would feed into UN climate negotiations.

The president's position received a skeptical response. "What they placed on the table at this meeting is a first step, but is simply not enough," said South African environment minister Martthinus van Schalwyk, "we think that the US needs to go back to the drawing board."

Other participants called the US position "isolated" and suggested the current administration was increasingly irrelevant in the run up to a new government in January 2009.

41. Dimas Spells Out Europe's Checklist For Bali

EU environment commissioner Stavros Dimas criticized America's approach to international climate policies at a meeting in Brussels and insisted that a post-2012 global framework must
include binding targets for developed countries. Speaking to a joint meeting of EU and national parliamentarians on climate change, Mr. Dimas said that the US preference for non-binding targets will "offer no real solution" and could in fact prevent progress.

The commissioner outlined eight key "building blocks" that the EU believes are necessary for a workable and effective post-Kyoto agreement.

Mr. Dimas also revealed that the commission now has the initial findings of an impact assessment of the climate and energy commitments made by EU leaders in March. The study confirms that the investment required will amount to only "a fraction of the benefits that will be delivered", he said, but did not confirm any specific figures.

The head of Portugal's national assembly, Jamie Gama, emphasized the need to allow for "sustainable economic development" in EU and global climate policies. Mr. Dimas responded by saying that countries’ GDP and projected economic growth are being taken into account in the commission’s burden sharing calculations for the 20 per cent emission reduction and renewables target for 2020.

### 42. Test Failures Batter Diesel Retrofit Business

The retrofitting of soot filters onto older diesel vehicles has virtually stopped in Germany after published test results showed that some of the devices failed to meet national standards. TUEV Hessen, a technical inspection group, said some filters it tested, made by Bosal and GAT, failed to meet German government criteria for effectiveness in reducing diesel particulates. At least 30 percent of the soot must be captured by an aftermarket filter to qualify for the German government's 330 Euro ($472) subsidy. Filters that failed the tests captured zero percent to 10 percent of the particulate matter.

Owners of older diesels are getting the filters to avoid paying a higher road taxes on their cars. The taxes are based on amount of tailpipe pollution a car emits.

Because news of the tests has crippled aftermarket filter providers, a spokesman with the German motor transport authority said the organization has commissioned TUEV Nord, another technical group, to review the Hesse test results and retest the systems.

The transport authority reported that three of Bosal's filters failed the second test. It is awaiting results of the second test of GAT’s filters.

The German Association for Motor Trades and Repairs (ZDK) estimates the market for diesel retrofits will reach 1.5 million units by late 2009.

### 43. EU Lawmakers Back Plan to Boost Renewable Energy to 20 Percent by 2020
On September 25th, the European Parliament approved a plan to enforce greater use of renewable energy in order to secure a 20 percent market share by 2020 for energy sources such as wind, wave, biomass, and solar power. The proposal, Road Map for Renewable Energy in Europe, formed part of a package of energy targets suggested by the executive European Commission in January. The energy package seeks to curb greenhouse gas emissions, reduce burgeoning European Union dependence on costly imports of hydrocarbons, and promote development of green energy technologies.

EU Energy Commissioner Andris Piebalgs foresees that the 20 percent target for renewables will be a legally binding collective commitment on the part of the 27 EU member states. National action plans spelling out how states will contribute to the EU target will require clearance from the Commission. Piebalgs said he would issue by year's end draft legislation enshrining the 20 percent target. The draft legislation would require states to specify "sectoral targets, the development tasks in each sector, and the measures to be taken in order to reach those targets."

In December 2006, the Parliament called for "ambitious, binding" targets aimed at a 25 percent market share. But heads of government at an EU summit in March insisted that the target should be no higher than 20 percent.

Noting that renewables account for only around 7 percent of EU energy consumption, the Parliament’s current proposal "deplored" the likelihood that a current interim target of 12 percent use by 2010 will be missed. Lack of interest among local and regional authorities was blamed.

Lawmakers said that burden-sharing procedures must make allowances for widely divergent national energy markets, national resources, climatic conditions, and current levels in the use of renewables. Finnish legislator Alexander Stubb feared a situation in which "small states such as Finland," which already gets 25 percent of its energy from renewable sources, must "hike up their burden to, say, 45 percent, whereas the biggest states in the Union, which consume 60 percent of the energy, maintain much lower standards."

Separately, Commissioner Piebalgs rejected rumors circulating since the March summit that electricity from nuclear generation might count toward the 2020 target. "I can clearly state that this is not, and never has been, the case. The 20 percent target for renewables in EU final energy consumption can only be met by renewable energy," he said.

Regarding costs, Commissioner Piebalgs argued that the European Union has yet to realize the urgency of switching to home-produced renewables. The European Union has been sheltered from soaring oil and gas prices by the "fortunate coincidence" that the euro exchange rate has risen to US$1.40, largely canceling out the extra cost of oil at $80 a barrel, he said. His original estimate that investment in wider production and use of renewables would cost the EU economy [Euros] 18 billion ($25 billion) was based in part on a projected cost for oil of $48 per barrel in 2020. "If the [dollar to euro] exchange rate had remained at 1:1, we would now have energy
costs 50 percent higher--and a lot of national parliaments would by now be discussing emergency aids," Piebalgs said.

Meanwhile, in an effort to boost competition and investment in EU energy markets as well as lower prices and reduce greenhouse gases, the European Commission Sept. 19 proposed a comprehensive new regulatory framework. The legislation calls for the unbundling of power utilities so they do not control transmission networks, strengthened rules for national regulators, a new EU energy agency, transparency obligations for utilities and mandatory cooperation rules.

44. France Reaches Consensus On Climate Change

On September 27th, participants in a nationwide consultation on French environmental policy presented a series of innovative proposals for combating climate change, but they failed to reach consensus on several other topics, including future regulation of genetically modified crops, nuclear energy, pesticides, and waste incineration. Various working groups contributed to the report, which offers hundreds of potential policy reforms while drawing attention to the wide gaps between various interest groups on key topics.

The ongoing national environmental debate--one of the key campaign promises of recently elected President Nicolas Sarkozy--will head into a new stage in October, when Parliament and the general public will have the opportunity to discuss policy proposals reached through the consultation process.

The new round of debate will set the stage for a national environmental policy summit set for late-October, when Sarkozy is slated to make the final decision on 10 to 15 specific "action plans" for the coming five years.

Participants in a working group on future climate change policy said France should seek to bring transport emissions down to 1990 levels by 2020. To reach this goal, the working group--led by climatologist Jean Jouzel, a French participant in the Intergovernmental Panel on Climate Change--suggested that the government:

- Enact a 10-kilometer (6-mile) per-hour reduction in the national speed limit, to limit fuel use and greenhouse gas emissions;
- Develop a new vehicle labeling and taxation system, with high taxes on gas-guzzling, high-pollution vehicles and low taxes or exonerations for more efficient cars; and
- Step up investment in public transportation to reduce vehicle use.

The working group was unable to achieve consensus in other areas of transport policy. But the group noted that some participants in the discussion supported a new tax on long-distance
truck, a new tax on aviation fuel, a new carbon tax on all emissions, and a moratorium on new motorway construction.

45. French Study Will Analyze Exposure Of Children to Chemicals, Pollutants

France will launch in October a new installment of an ongoing research project that aims to determine how a variety of factors, including exposure to chemicals and other environmental pollutants, affect children's health and development. By 2009, the French Longitudinal Study of Children project, ELFE: Growing Up in France, will build an extensive and representative database on 20,000 children, whose health and development will be followed from birth to adulthood, according to a statement from project organizers.

The multidisciplinary research program will monitor a range of factors in development, including family structure, social and physical environment, schooling, behavior, and nutritional behavior. It will also provide scientists a unique epidemiological tool for assessing cumulative exposure to specific environmental conditions, according to the statement. Environmental sensors may also be placed in children's homes, according to a summary of the study.

The environmental aspect of the study will address exposure to substances where impact on health is known, such as lead, as well as in areas where effects remain in doubt, such as pesticides or phthalates. The study also will assess the impact of exposure to environmental pollutants, notably by cross-referencing residential information in the planned database with national water and air quality testing data and other data on fixed sources of pollution.

The study--run by a handful of state-affiliated research agencies, including the National Institute for Health and Medical Research and the National Institute for Public Health Surveillance--was launched in April, with a pilot sampling on 300 children in the central French region of Burgundy and the northern French region of Picardy. Researchers will carry out a second pilot sampling in October on 500 children in the southern Rhone-Alpes and northern Seine-Saint-Denis regions.

The pilot programs are designed to fine tune data collection methods, in the run-up to full database formation by 2009.

46. Study Says Pollution Deadlier Than Car Crashes in Europe

Air pollution has cut the average life expectancy of Europeans by nearly a year and contributes to the premature deaths of hundreds of thousands of people annually, according to the European Environment Agency. Levels of air pollution reduce life expectancy by as much as two years in the most affected areas of Belgium, the Netherlands, northern Italy and parts of Poland and Hungary, the report said.

"Poor air quality is still causing hundreds of thousands of premature deaths in Europe every year and continues to damage crops and ecosystem health," the report said.
"The estimated annual loss of life is significantly greater than that due to car accidents."

Some 870 million people live in the region, more than half in western and central Europe, the report said.

The agency also urged quick action to limit greenhouse gas emissions linked to global warming and to improve air and water quality in the region, the 400-page report said.

The situation is particularly bleak in Eastern Europe, the Caucasus and Central Asia where air-polluting emissions have jumped about 10 percent since 2000 as a result of developing economies, increases in transportation and poor pollution-curbing policies, the report said.

"To respond to these complex environmental issues, we need cooperation across the pan-European region as well as targeted financial and technical support," the group said.

47. Paris Adopts Plan to Cut Energy Use, Greenhouse Gas Emissions by 30 Percent

On October 1\textsuperscript{st}, the Paris City Council adopted a new Climate Action Plan that calls for a 30 percent reduction in the municipal government’s energy use and greenhouse gas emissions by 2020, as well as a 25 percent reduction in total emissions from the French capital. Over the long-term, officials in France’s largest city committed to the government’s stated objective of curbing greenhouse gas emissions and energy use by 75 percent by 2050.

The top measure in the new plan is designed to improve energy efficiency in city-owned housing and real estate, which is responsible for about one-third of the city’s total emissions. Paris Mayor Bertrand Delanoe likened the measure to "a new Marshall Plan."

The Climate Plan calls for renovation of more than 3,000 city-owned buildings by 2020, as well as similar renovation in at least one-quarter of all city-owned housing.

Fiscal policy will be brought to bear on privately owned real estate, with new tax breaks planned to ensure energy efficiency renovations in at least 100,000 buildings by 2050, according to the plan.

The climate plan aims to reduce transport emissions through further expansion of Paris’ public transport infrastructure, coupled with continuation of ongoing projects aimed at reducing vehicle traffic across the city.

The plan also calls for:

- tighter environmental quality standards for all new construction within city limits;
• acquisition of low-emission hybrid vehicles; and

• Expanded investment in new renewable energy projects, which should represent 30 percent of all municipal energy needs and 25 percent of private energy needs by 2020.


On October 9th, in his pre-budget report and spending review, the U.K. Chancellor of the Exchequer pledged to fight climate change and laid out a number of measures to encourage energy efficiency through taxation. In his speech to the House of Commons, Chancellor Alistair Darling said he would be increasing the Climate Change Levy--an existing tax on the use of energy by businesses--in line with inflation in 2008, and that he would take steps to encourage businesses to increase their use of microgeneration, the small-scale production of energy from a low-carbon source.

The chancellor said he wanted to establish the United Kingdom as being at "the cutting edge of the next generation of technology for low carbon electricity," and that he would set out criteria for a competition to build Britain's first carbon capture and storage project. He said the carbon sequestration project has the potential to reduce emissions from coal-fueled power stations by 90 percent.

The British government is expected to announce the budget for the 2008 tax year in March 2008. The tax year begins in April 2008.

Darling also said that more money would be channeled into the coffers of the Department of Environment Food and Rural Affairs to provide for a "step change" in investment for sustainable waste management options." He also proposed to increase the use of auctioning of carbon allowances as the European Union moved toward the next stage of the EU Emissions Trading Scheme.

In addition, Darling said the government would take a number of measures to reduce the impact of aviation on the environment, including the imposition of a levy on flights, to be implemented after 2009, and lobbying for the inclusion of the aviation sector into the EU Emissions Trading Scheme.

Outlining the government's belief that technology may provide a partial solution to the issue of climate change, the chancellor announced the creation of an Environmental Transformation Fund. The fund, with a three-year budget of £1.2 billion ($2.4 billion), would both invest in U.K. research into emissions reduction technologies, and "support poverty reduction in the poorest countries through environmental protection."

49. **Swedish Government Plans Tax Increase For Carbon Dioxide Emissions**
The Swedish government has pledged to increase the tax on carbon dioxide emissions in 2008, a move that will result in a hike in gasoline prices. Announcing the measure as part of his 2008 budget plan, Finance Minister Anders Borg confirmed to parliament on September 20th, that a 6 ore ($0.01) increase per kilo of emitted carbon dioxide will lead to gasoline prices increasing by 17 ore, or less than three cents, per liter as of 2008.

The tax on diesel fuel also will increase by 20 ore ($0.03) per liter, although the vehicle tax on diesel-fuelled cars will be reduced by 284 kronor ($43.50) annually, Borg said. In addition, the duty on ethanol will be abolished "as soon as possible" to encourage owners of ethanol enabled vehicles to use the fuel instead of gasoline.

The hike will bring the total tax on carbon dioxide emissions to 1.1 kroner ($0.17) per kilo of emitted carbon dioxide, according to the government statement.

The budget plan also envisaged a 10 kroner ($1.50) increase in nitric oxide taxes to 50 kroner per kilo, a move that the government hopes will reduce emissions by some 3000-5000 metric tons per year. The measure will be evaluated after two years. Other proposals include a new "sustainable cities" program designed to "promote integrated solutions for water, energy and wastewater, conversion and new construction of buildings with minimal heating needs."

**NORTH AMERICA**

50. **Court Rules That States Can Control Greenhouse Emissions**

States can limit vehicle emissions of gases that contribute to global warming despite the Bush administration's refusal to do so, a federal judge has ruled, rejecting the auto industry's challenge to a Vermont statute and spurring optimism among supporters of a pioneering law in California. In a 240-page decision, U.S. District Judge William Sessions in Montpelier, Vt., emphatically rejected automakers' central argument against the laws in both states - that the only way to reduce greenhouse gas emissions is to increase fuel economy, an area regulated exclusively by the federal government.

"Nothing in (federal law) indicates that Congress intended to displace emission regulation by California that would have an effect on fuel economy," Sessions said, noting that Vermont's law is identical to California’s 2002 statute. He also denied the industry's claims that state regulation would make cars unaffordable and unsafe.

The ruling raises the stakes in a separate review of California’s law by the Environmental Protection Agency. Sessions noted that the laws in California, Vermont and 10 other states that have followed the California model will become unenforceable if the EPA denies California a waiver allowing the state to impose stricter controls on air pollutants than the federal government does.
The EPA has been considering California’s request for nearly two years. Gov. Arnold Schwarzenegger has threatened to sue the federal agency unless it acts by October 25th.

"Today, we won in court, and yet the victory will be a hollow one if EPA succeeds in stalling and ultimately denying our request," said state Attorney General Jerry Brown, who argued California's case to the federal agency earlier this summer.

In light of the ruling, "the EPA is going to be hard-pressed to say that the (state) regulations aren't feasible or are too costly," said David Doniger, a lawyer with the Natural Resources Defense Council who helped to argue the Vermont case and is taking part in a similar lawsuit in California.

U.S. District Judge Anthony Ishii of Fresno has scheduled a hearing on October 22nd on a suit by car manufacturers, who make the same arguments that they raised in Vermont. Although Sessions’ ruling is not binding on Ishii, it should be persuasive, said Doniger and other environmentalists backing California's position.

"This decision should put the nail in the coffin of the failed arguments of the auto industry," said Sierra Club attorney David Bookbinder.

Schwarzenegger said in a statement that the ruling "marks another important victory in the fight against global warming. California and other states will no longer be blocked by those who stand in our way."

Both the Vermont and California laws require makers of cars and light trucks to begin reducing emissions of carbon dioxide and other greenhouse gases - considered by the mainstream scientific community to be a cause of global warming - with the 2009 models and to achieve 30 percent reductions by 2016.

The lawsuit by auto manufacturers and dealers argued that the Vermont law conflicted with federal laws on air pollution and fuel economy and, by injecting states into an international issue, interfered with the president’s authority over foreign policy.

Sessions, who was appointed to the federal bench by President Bill Clinton in 1995, held a 16-day, nonjury trial this spring. He then put the case on hold while the U.S. Supreme Court considered the Bush administration’s claim that the EPA lacked authority over greenhouse gas emissions from cars.

The high court rejected that view in April, ruling 5-4 that the emissions were air pollutants and that the EPA must regulate them unless it comes up with scientific justifications not to act.

Sessions cited the Supreme Court ruling in Wednesday's decision, noting that the court found no conflict between regulation of greenhouse gas emissions and fuel economy standards. He
also said automakers have other ways to reduce the emissions besides increasing gas mileage - for example, using alternative fuels and other technological innovations.

The judge likewise dismissed industry arguments that the state controls would conflict with federal consumer and auto safety regulation by making cars more dangerous and less affordable.

The industry’s expert witness testified that the state laws would increase car prices by $5,000 and force General Motors, DaimlerChrysler and Ford to stop selling cars in the affected states, but those assertions were unsupported by the evidence, Sessions said. "It is improbable that an industry that prides itself on its modernity, flexibility and innovativeness will not be able to meet the requirements of the regulation," the judge said. He cited testimony that increased fuel efficiency prompted by emissions regulation would save the average car customer $5,000 over the vehicle's lifetime, at current gasoline prices.

Sessions also said industry claims of interference with U.S. foreign policy were unfounded because the Bush administration, in presentations to international agencies, has cited efforts by California and other states as evidence of U.S. progress on global warming.

The Christian Science Monitor took a look at what’s happening across the U.S., and predicted some ramifications of the Vermont case:

- The Environmental Protection Agency (EPA) may be prompted to grant California a waiver from the Clean Air Act. This would allow California, along with Vermont and the 10 other states with identical laws, to begin enforcing emission requirements for cars sold in their states.

- Six additional states – Arizona, Florida, New Mexico, Utah, Illinois, and Minnesota – may proceed with their own emissions requirements. All together, the 18 states that have vehicle emission laws or that are exploring them make up about half the U.S. auto market.

- Congress may have to reconsider new fuel-efficiency standards it’s currently weighing (which are not as demanding as Vermont’s). Or they could mandate a tougher federal requirement (more of a long-shot).

- Federal judges in two similar cases brought by the auto industry in California and Rhode Island could dismiss those cases if they determine the industry has had its day in court and further proceedings would be redundant.

The 12 states with emissions laws already on the books could cut up to 100 million tons each year. Overall U.S. emissions from cars and light trucks total about 1.5 billion tons per year.
51. **Automakers Appeal Vermont Court Decision on Emissions**

Major US and overseas auto manufacturers have appealed a Vermont court decision that upheld a stringent vehicle emissions law and handed a victory to states trying to regulate greenhouse gases. The Alliance of Automobile Manufacturers is challenging regulations imposed by California and adopted by a handful of other states, including Vermont, that go beyond federal rules to limit tailpipe emissions and improve fuel economy.

US District Court William Sessions in Burlington ruled in September that federal regulations did not preempt a state law that would require a 30 percent reduction in carbon emissions by cars and light trucks starting with 2009 models. Vermont, Connecticut, Maine, Massachusetts, New Jersey, New York, Oregon, Rhode Island and Washington adopted the rule, which must be approved by the US Environmental Protection Agency (EPA). Several states are considering the measure and watching legal developments closely. Cases are pending in California and Rhode Island. The Vermont challenge was the first to go to trial.

Sessions also rejected industry's claim that the Vermont measure would hurt their business. But industry pressed ahead with its notice of appeal that was filed with the district court in Burlington. The case now shifts to the 2nd Circuit Court of Appeals in New York.

Dave McCurdy, the auto alliance chief executive, said in a statement that Vermont's regulation is tantamount to a fuel efficiency standard and "federal law is very explicit: states are preempted from adopting fuel economy laws." "This appeal is urgent as this legislation applies to model year 2009 vehicles, which consumers will start seeing in early 2008 - just a few months from now," McCurdy said.

The Vermont attorney general's office had no comment on the appeal motion, which was anticipated. But in September, state Attorney General William Sorrell called Sessions' ruling a "big win" for "those concerned about a healthier environment."

52. **California Air Board Speeds Up Greenhouse Gas Emissions Cuts**

As part of California's effort to curb gases responsible for global warming, the state Air Resources Board, ARB, has proposed to nearly triple the set of early measures to help meet the state's goal of reducing greenhouse gas emissions roughly 25 percent by 2020 as required by the Global Warming Solutions Act. The Board is introducing new proposals to reduce greenhouse gases from the trucking industry, greener ports, cement and semiconductor industries, and consumer products.

"Today's announcement sets the stage for another step forward in achieving our goal to return the state's greenhouse gas emissions to 1990 levels by 2020," said ARB Chairman Mary Nichols. "Every single action we take - government, businesses, municipalities and individuals
alike - makes a difference toward ultimately cooling our planet," she said. "California is showing the country and the world that we can and will help reverse the ominous tide of global warming."

One of the eight new measures would ban the use of the greenhouse gas sulfur hexafluoride from non-essential applications if viable alternatives are available.

Another would allow docked ships to shut off their auxiliary engines by plugging into shore side electrical outlets.

These newly proposed early action measures are projected to eliminate 2.8 million metric tons of annual greenhouse gas emissions.

Combined with the early action measures adopted by the Board in June - a low carbon fuel standard, restrictions in do-it-yourself air conditioner repairs and methane capture from landfills - the ARB now has measures in the works to reduce statewide greenhouse gas emissions by nearly 16 million metric tons.

The proposed early actions combined with other measures proposed by the larger Climate Action Team could reduce greenhouse gas emissions by more than 36 million metric tons by 2020, roughly 21 percent of the total needed to meet the legally binding target of rolling back emissions to 1990 levels.

The Board will vote on additional proposed measures in Sacramento on October 25 and 26. In the meantime, ARB staff will hold a workshop on the new proposed measures to discuss the specifics and solicit additional input from stakeholders.

Governor Arnold Schwarzenegger signed the Global Warming Solutions Act on September 26th, 2006, establishing the world’s most comprehensive greenhouse gas reduction initiative. The law requires the ARB to implement a statewide greenhouse gas emissions reduction strategy. In addition, the Governor directed the members of the Climate Action Team to work alongside the ARB to reduce greenhouse gas emissions from their respective jurisdictions.

53. EPA and NHTSA Developing Greenhouse Rules

The Bush administration plans to propose new rules for vehicle emissions as part of a broad effort to reduce greenhouse gases. The National Highway Traffic Safety Administration and the Environmental Protection Agency's Office of Transportation and Air Quality (OTAQ) are moving quickly to propose a new regulation by the end of the year. Their goal is to have a final regulation in place before President Bush leaves office in January 2009.

After the Supreme Court ruled in April that the federal government has the right to regulate carbon dioxide emissions as a pollutant, President Bush issued an executive order in May directing several federal agencies to work together to craft new regulations. In recent weeks it
has become clear that the first regulation to be proposed by the working groups will be to regulate vehicle emissions, which account for about 20 percent of U.S. greenhouse gas emissions. Bill Charmley, deputy director of OTAQ's assessment and standards division, said EPA's first regulation would be to regulate vehicle emissions.

At a meeting of the National Academy of Sciences, officials from the NHTSA and EPA discussed the efforts to craft a new regulation. The two agencies have joint working groups on a number of subjects, including vehicle technology. EPA and NHTSA officials said the regulation is being proposed with President Bush's "20 in 10" proposal in mind -- he has called for reducing gasoline usage by 20 percent by 2017 -- in part by increasing the fuel efficiency of automobiles by an average of 4 percent per year.

Charmley said between 65 and 75 of OTAQ's 300 scientists, researchers and engineers are at work on the new regulatory process.

The EPA also said it has hired an independent engineering firm, Ricardo Co., to report to it on advanced technologies in trying to assess how much it should increase fuel efficiency standards. The British-based firm has is working on a $1 million product on modeling advanced new engines and will issue a report to the EPA by the end of next month, Charmley said.

The NHTSA has obtained the product plans of major automakers through 2017 as part of trying to assess how much automakers plan to increase the fuel economy of their fleets -- in the absence of new regulations. The NHTSA declined to answer any questions about what's in those highly confidential plans.

The NHTSA and EPA want the National Academy of Sciences to update a landmark 2002 study on fuel economy regulations and automobile efficiency. The NAS would provide an "independent peer-reviewed" assessment of what automakers are capable of, which would be a big benefit to the Bush Administration's plan to create its new regulations, said Julie Abraham, a senior NHTSA official.

The flurry of activities behind the scenes comes as Congress is considering whether to mandate specific increases in corporate average fuel economy, which for passenger cars hasn't been raised since the program was first created in 1975. The initial regulation forced automakers to more than double the fleetwide fuel economy of passenger cars to 27.5 miles per gallon by 1985.

The Senate voted 65-27 in June to force automakers to high fuel efficiency by 40 percent to a combined 35 miles per gallon by 2020 -- a move that could reportedly cost domestic automakers more than $85 billion. Automakers have backed a less stringent bill that would hike fuel economy by at least 28 percent -- increasing fuel economy to up to 35 miles per gallon by 2022. The "Hill-Terry" bill -- named after its sponsors -- has more than 160 cosponsors in the House and would require them to average between 32 and 35 miles per gallon.
The House sidestepped the issue of whether to raise fuel economy standards in August when it approved an energy bill. It's not clear when both houses might begin the process of trying to negotiate a compromise energy bill.

54. Federal Court Dismisses California GHG Lawsuit Against Vehicle Manufacturers

On September 17th, a US federal judge granted the defendants' request to dismiss a lawsuit brought by California's attorney general. The state had sought damages from six vehicle manufacturers in compensation for the effects of their products' greenhouse gas emissions. The judge in the Northern District of California wrote in his judgment, "The Court finds that injecting itself into the global warming thicket at this juncture would require an initial policy determination of the type reserved for the political branches of government."

The suit, filed a year ago, targeted GM, Ford, Toyota, Chrysler, Honda and Nissan. The state of California has also threatened to sue the U.S. Environment Protection Agency if it does not grant a waiver to the state from federal regulations that would permit it to enact its own CO2 emissions limits for vehicles. The U.S. Supreme Court has ruled, against the present U.S. administration, that the EPA does have the authority to set CO2 emissions standards for vehicles.

U.S. District Judge Martin Jenkins on Monday tossed out a California lawsuit that claimed the world's largest automakers should be held accountable for the impact tailpipe emissions were having on the environment. California claimed emissions were causing drought, beach erosion and warmer temperatures.

The state sought millions of dollars in damages from the large automakers. Seeking to dismiss the suit, automakers argued the state didn't sue smaller automakers that emit carbon dioxide -- or power plants that do the same. They also said the U.S. government has sole authority to regulate emissions.

In issuing his order Monday, Jenkins said California was better suited seeking action from Congress, rather than from the courts. If the court awarded California money it would "punish (automakers) for lawfully selling their automobiles both within California and outside California in the global market," Jenkins wrote.

The court also said that it was impossible to determine "what is an unreasonable contribution to the sum of carbon dioxide in the Earth's atmosphere, or, in determining who should bear the costs associated with the global climate change that admittedly result from multiple sources around the globe."

55. "Learning from California's Zero-Emission Vehicle Program"
The Public Policy Institute of California (PPIC) has released "Learning from California's Zero-Emission Vehicle Program," a 20 page report which has lessons to teach and information for all concerned about what the state can do to reduce greenhouse gases and combat global warming.

The 1990 Zero-Emission Vehicle Program, promulgated by the California Air Resources Board (CARB), was designed to require the auto industry to develop zero-emission vehicles for use in California. CARB estimates that by 2020, as a result of the ZEV program, approximately 60 percent of new vehicle sales in California will be made up of ZEVs (zero emission vehicles), PZEVs (partial-zero-emission vehicles), or AT-PZEVs (advanced-technology partial-zero-emission vehicles).

According to the PPIC report, "Given the technology available, the program became a de facto mandate to develop battery-powered vehicles. But to date, it has had little effect on private sector improvement of the cost-effectiveness or performance of battery-electric technology."

"The problem? The program's regulatory goals were tightly tied to this single, very advanced technology—and overestimated how rapidly battery-electric vehicles could become market-ready. When the technology failed to live up to performance or cost expectations, the state made major changes to the program. This sent uncertain demand signals to business—potentially slowing industry innovation."

PPIC research fellow Louise Bedsworth, co-author of the study with Margaret Taylor, assistant professor of public policy at the University of California at Berkeley has said: "Although disappointing, the program has valuable implications for California's current efforts to curb global warming. As with the zero-emission vehicle program, meeting the state's global warming goals will require significant technological advances. The challenge for policymakers is how to use regulation to inspire this development in the private sector—a delicate balancing act that could have a better chance of success if it accounts for technological and industrial realities."

The main conclusions and recommendations of the authors are:

- Actions that the state undertakes to reduce GHG emissions can provide strong market demand signals for new technology. In the ZEV program, that action was the sales mandate. Changes in the ZEV program were necessary to avoid passing on unacceptably high costs to consumers or creating vehicles that did not meet expectations, but these changes also created uncertainty for new technology providers. Policies to reduce climate change emissions need to maintain a balance between sending stable market demand signals while also ensuring that emission reductions are feasible and cost-effective.

- Technology neutrality can help achieve such a balance. Neutrality can prevent a regulation from being tied to the fate of a single technology—vehicle batteries in the case of the ZEV program. Neutrality can also reduce volatility, preserve a
stable demand signal, and reduce the risks to consumers by avoiding a commitment to suboptimal technology.

- Performance standards have been largely responsible for the successful reduction of vehicle emissions to date. These standards have maintained flexibility while maintaining aggressive environmental goals.

- Climate policies need to consider full life-cycle emissions. The fuel cell vehicle requirements under the current ZEV program could result in increases in GHG emissions if the source of hydrogen is not taken into consideration.

The Public Policy Institute of California is a private, nonprofit organization whose purpose is to improve public policy in California through independent, objective, nonpartisan research on economic, social, and political issues. The institute was established in 1994 with an endowment from William R. Hewlett.

56. NAS Study Urges U.S., China on Energy Efficiency

Los Angeles and Pittsburgh provide examples of what to do — and not to do — about China's severe air pollution in the face of surging energy use from rapid economic growth, U.S. and Chinese scientists say. The study released Thursday compared the world's two biggest energy consumers, the United States and China. One of the most important lessons - it makes more sense to try to prevent pollution, rather than clean it up afterward. The study also found that national controls are important, though focusing on small sources of pollution also can have a broad impact.

Los Angeles was compared with the Chinese city of Dalian, both port cities, while Pittsburgh was stacked against Huainan, both coal-rich centers of industry.

According to the study, the result of a 2 1/2 year collaboration between U.S. and Chinese academies of engineering and sciences, both countries still have major problems with dirty air and must improve their energy efficiency.

Los Angeles' serious smog problems are well-studied and the city uses federal and local planning to try to address it. On the other hand, its over-reliance on cars and sprawling development haven't helped, the study said.

Pittsburgh began attacking its smog problem in the 1940s, but only after early reliance on coal that overlooked the consequences of air pollution.

"An important lesson learned is that air pollution damage imposes major economic costs, through premature mortality, increased sickness and lost productivity, as well as decreased crop yields and ecosystem impacts," the report says. "Cost-benefit analyses in the U.S. show that
emission reduction programs have provided much greater benefits than their costs, by a ratio of up to 40 to 1, according to some estimates."

U.S. efforts in the past 30 years have reduced the biggest risks from lead in gasoline, acid rain-causing sulfur dioxide and some soot pollution, the study says, though in some areas the Chinese are ahead — such as in research on coal gasification — to use it more efficiently and emit less pollution. Coal gasification is the conversion of coal into gaseous fuels.

By contrast, Dalian’s urban planning to minimize sprawl and its local transit — more bicycles, pedestrians, buses and light rail — is seen as an example for Los Angeles.

"In China, they have very good rules but they don't have good enforcement for air pollution," said John Watson, a co-chairman of the report and professor at Reno, Nev.-based Desert Research Institute. "They're making a lot of the same mistakes we made in our air pollution history. You can just see the parallels: they're building more highways and encouraging more sprawl."

Though fossil fuel burning dominates both nations, a major difference is the source for roughly two-thirds of their energy needs: for China, which has some of the world's filthiest air, it is coal; for the United States, it is petroleum and natural gas.

China is the world's biggest emitter of sulfur dioxide; both countries lead the world in their emissions of industrial carbon dioxide, a heat-trapping gas blamed for warming the atmosphere like a greenhouse. But the study skirted the issue of global warming.

Another recommendation is that the Chinese government focus on collecting and providing good quality data on air pollution and energy uses.

57. EPA Sued Over Pollution From Ocean Ships

Environmentalists have sued the federal government, complaining that it has failed to regulate emissions from oceangoing vessels that pollute the air and cause respiratory illness around ports nationwide. The lawsuit alleges that the Environmental Protection Agency has missed its deadline to set emissions standards for ship engines that spew exhaust into communities surrounding major ports in Oakland, Long Beach, Los Angeles, Houston, Seattle and other cities. The complaint was filed by Oakland-based Earthjustice on behalf of Friends of the Earth.

Oceangoing ships are among the fast-growing sources of air pollution, with emissions projected to double in North America over the next 10 to 20 years. A single cruise liner or cargo ship can emit as much pollution as 350,000 cars and hundreds of large vessels dock at the nation's major ports each month, activists said.
Studies have linked air pollution from ports to higher rates of asthma, cancer, heart disease and other health ailments.

The complaint alleges that the EPA is required to regulate ship pollution under the federal Clean Air Act. In response to a previous lawsuit by environmentalists, the agency had committed in 2003 to set emissions standards by April this year, but no new regulations have been issued.

The complaint also contends that the agency has failed to regulate ships registered in foreign countries, which make up more than 80 percent of large vessel traffic at U.S. ports.

### 58. California AG Asks U.S. EPA to Regulate CO2 Emissions from Ships

California Attorney General Jerry Brown has petitioned U.S. EPA to regulate ocean ship CO₂ emissions. “The U.S. EPA has the authority to curb greenhouse gas emissions and our petition today asks the agency to exercise that authority without delay,” Brown claims.

“Ocean-going vessels, in total, emit more CO₂ emissions than any nation in the world except the U.S., Russia, China, Japan, India and Germany. Ominously, these emissions are projected to increase nearly 75% during the next 20 years. “International law guarantees a right of ‘innocent passage’ for all ocean-going vessels, but this right does not include polluting the air or water near our coastal cities,” Brown said.

California has the authority to file a petition asking the EPA to establish CO₂ emissions standards, as a result of a U.S. District Court ruling over highway vehicle CO₂ (Massachusetts vs. EPA), he claimed.

Meantime, International Maritime Organization (IMO) “has authority under international treaties to establish pollution standards for vessels but to date has failed to adopt controls on greenhouse gas emissions. At a recent meeting of the IMO Marine Environment Protection Committee, it was agreed to inventory greenhouse gases by 2009, but no commitment was made to regulate such emissions,” he said.

Most of the world’s ships are diesel-powered. IMO has a separate proceeding underway that aims to slash particulate matter (PM), nitrogen oxides (NOx) and other noxious emissions from ships, in part through fuel desulfurization as well as new engine emissions controls.

### 59. Court Stops California From Regulating Shipping Fuel Standards

A federal court has stopped California from enforcing a new fuel standard designed to cut use of bunker fuel from cargo ships as they reach ports in the Golden State. In November 2006, the California Air Resources Board enacted a new regulation requiring ships to use low-sulfur fuel in auxiliary engines that come within 24 miles of the state’s coast. The Pacific Merchant Shipping
Association – representing the shipping industry – asked the court for an injunction against the CARB reg because shippers believe any new reg should be federal.

U.S. District Court Judge William Shubb issued a ruling that California can't implement new fuel standards without approval from the EPA because the new standard sets specific numerical emissions requirements. “Should defendants receive authorization from the EPA,” Shubb wrote, “they may move this court to dissolve this injunction.”

The federal government has had control over emissions standards since 1967, though Congress granted California an exemption from the Clean Air Act due to its position as the “leader in the establishment of standards for regulation of automotive pollutant emissions,” according to court documents. California must, however, obtain EPA approval, Shubb’s decision states.

**60. Study Predicts Worse Air Pollution Days For Eastern U.S. Cities**

If global warming continues unabated, more polluted air days are predicted for the summer for Cleveland, Columbus, and eight other eastern U.S. cities. In a report released Thursday, researchers at Yale, Johns Hopkins, Columbia and other universities say that air pollution for these cities will worsen because of sudden increase in unsafe air days caused by ground-level ozone.

Ground-level ozone is generally formed from a combination of vehicle and factory pollutants and sunlight and heat. The study looked at 10 U.S. cities, including Virginia Beach, and concluded that if no steps are taken to curb trend of global warming, the cities many witness number of smoggy, "red alert" days.

The analysis was conducted by the Natural Resources Defense Council in partnership with several universities.

Calling for an 80 percent reduction in greenhouse gas emissions by 2050, the researchers predicted an increase in "unsafe air days", which are defined as days when ozone levels exceed an 8-hour quality standard set by the U.S. Environmental Protection Agency.

The most prominent increase will be seen in the two Ohio cities, along with Washington, D.C.; Philadelphia; Greenville, South Carolina; Memphis, Tennessee; Virginia Beach, Virginia.; and Asheville, Raleigh and Wilmington, North Carolina.

The study also concluded a 68 percent, or 5 1/2-day, increase in unsafe air days for 50 eastern U.S. cities. It would have severe impact on asthmatics and cause respiratory problems, particularly in children and the elderly.
61. October 1 Deadline On EPA Diesel Fuel Regulations

Farmers with on-farm fuel storage tanks larger than 550 gallons have until October 1st to meet EPA regulations regarding the sulfur content for their off-road diesel or face fines of up to $32,500 per day per violation. By October 1, the diesel fuel in those tanks must contain 500 parts per million (ppm) or less of sulfur, as part of a national reduction of sulfur in fuel. The current high sulfur diesel in those off-road tanks may contain from 2,000 to 5,000 ppm sulfur.

Farmers with tanks of less than 550 gallons of capacity have until Dec. 1 to achieve compliance.

In either case, “compliance” means that the fuel in the tank must be 500 ppm or less. Many fuel providers have already started switching customers to the low sulfur fuel to allow fuel turnover in the tank to bring them into compliance.

Low sulfur diesel comes with a higher price tag, too; low sulfur diesel is running about seven cents over high sulfur diesel.”

Farmers who are concerned that their 550-gallon-plus tanks may not be in compliance by Oct. 1 have several options:
- Full clean-out is one option. Tank cleaning companies can remove the entire contents of the tank and clean out water, debris, sludge, rust and any other contaminants at the same time. After cleaning, a new delivery of low sulfur fuel should assure compliance.
- Installing a new tank in lieu of a full clean-out is another option, as long as the fuel in any remaining tanks is compliant by the appropriate deadline.
- Draining existing tanks of high-sulfur fuel and then “blending down” existing tanks with the new on-road ultra low sulfur diesel (ULSD) is another way to achieve compliance.
- Farmers who still have large volumes of high-sulfur diesel can transfer that fuel to their home heating oil tanks, where it is not affected by these regulations, and then blend down the remaining fuel with ULSD.

Also under federal law, dispensers on fixed or skid tanks with a capacity of 550 gallons or greater must be labeled with special decals indicating the sulfur content. The decals must be placed near the dispenser mechanisms. Farmers may be able to obtain EPA-approved labels from their fuel distributor.

The new regulations cover a broad range of non-road diesel fuel uses.

Stationary engines built or modified after April 1, 2006 are also required to have low sulfur dyed diesel fuel in their tanks after October 1. High-sulfur fuel (now referred to as “heating oil”) may continue to be used in older stationary engines installed prior to April 1, 2006. Stationary engines include generators used to create electricity and operate compressors and pumps, including stationary but portable engines used in emergencies.

Truck refrigeration units are also required to use low sulfur dyed diesel fuel after Oct. 1.
Pure biodiesel, which is virtually sulfur-free, would be considered a compliant fuel under these regulations. However, since most biodiesel is blended with petroleum diesel, farmers who use biodiesel blends should check with their fuel provider to be sure that the petroleum blendstock is below the 500 ppm limit.

According to the New England Fuel Institute, the EPA classifies kerosene as a diesel fuel, and therefore has made off-road kerosene subject to the new NRLM regulations. The only exception is for kerosene used in space heating applications.

Further sulfur reductions are set for phase-in beginning June 1, 2010, when the sulfur content for non-road diesel will be further reduced to a maximum of 15 ppm — the current requirement for on-road diesel.

The new sulfur reductions are expected to significantly reduce air pollution and improve public health, according to EPA. Pulmonary lung disease, chronic bronchitis and asthma have all been attributed to smog and fine particulate matter in the air.

62. Ontario Files Comments With EPA On Rules for Smog-Causing Ozone

The Ontario government has submitted comments to the U.S. Environmental Protection Agency asking it to give environmental and human health considerations priority in its revisions to national ozone standards, according to Environment Minister Laurel Broten. The revisions proposed by EPA would set a standard of 70 parts per billion to 75 ppb for ozone, lower than the current standard of 80 ppb but not meeting the current Canada-Wide Standard for Ozone of 65 parts per billion, Broten said in a statement.

"Ground-level ozone is a serious threat to human health and the environment in this province," she said. "The province of Ontario wants the EPA to consider the environment and the health and wellbeing of both Canadian and U.S. citizens when they issue the new standard."

Ontario's comments to the EPA indicate that the provincial government is pleased that the agency is taking steps to tighten the U.S. standard, as there is compelling evidence that ground-level ozone poses a serious and growing health and environmental problem. Ontario estimates suggest that more than 4,800 premature deaths per year are caused by high levels of ozone and particulate matter, and annual health damage costs due to excessive air pollution total C$6.6 billion ($6.3 billion), the document said.

During hot summer days, when ozone pollution is at its worst, more than 50 percent of all ozone in Ontario, excluding background levels, comes from sources in the United States, it said. Even if Ontario were to reduce to zero its own sources of air pollution, it would still experience exceedances of its ozone standard at most measuring stations, particularly those located near the Canada-U.S. border, it said.
"Ontario strongly recommends that EPA adopt a standard that is at least as stringent as the Canada-wide Standard for ozone of 65 parts per billion, averaged over an eight-hour period," it said. "We say this not only because we believe that a standard at least as stringent as the Canada-wide Standard is needed in order to protect public health and welfare but also because Ontario is downwind of major ozone-causing emission sources in the United States and cannot sufficiently control its own ozone levels without cooperation from the United States."

63. Ontario Finalizes Tougher Standards For 14 Toxic Air Pollutants

On August 31st, Ontario Environment Minister Laurel Broten published final regulations to impose tougher air quality standards for 14 toxic substances. The amendments to Ontario Regulation 419/05 (Air Pollution-Local Air Quality) under the province's Environmental Protection Act set 19 new or updated standards for the substances, including the world's toughest standards for lead, based on improved scientific information and updated data on health risks, Broten said in a statement.

The updated standards will be phased in for 13 of the substances by Feb. 1, 2013, but the new standards for lead releases will be phased in by Feb. 1, 2010, the Ontario Ministry of Environment said in a statement published with the finalized regulatory amendments on the province's Environmental Registry.

The Ministry of Environment statement also summarized the comments received after the April 7th publication of the standards in draft form for public comment, as well as its responses to the comments received.

The 14 substances covered by the new standards are n-butanol, cadmium and its compounds, chlorine dioxide, chloroethane, 1,1-dichloroethane, ethylene oxide, isobutanol, lead, methyl chloride, phosphoric acid, propylene, sulfuric acid, total reduced sulfur and compounds, and trimethylbenzenes.

64. Pilot Program Uses Roadside Monitors To Test Emission Levels.

In recent weeks, an innocuous white van has been parked on a Los Angeles freeway onramp, as well as other key locations across the region. Inside is new technology in the battle for cleaner air. The van is loaded with high-tech equipment that uses ultraviolet and infrared sensors to measure the amount of pollution spewing out of the tailpipes of passing cars.

No, you will not get pulled out of your car, handcuffed and sent to the Twin Towers for spewing out too much crud. But you will get a polite letter in the mail, suggesting you volunteer for a program that will pay for up to $500 in emission system control repairs or $1,000 to take your vehicle off the road permanently.
The program began in March and so far 2,000 letters have been sent out, resulting in a couple hundred vehicles being repaired and a few dozen scrapped.

The results so far might sound like small change, but the aim of this pilot program, costing $4 million, is much larger. The measures are part of a future of tough new regulations and enforcement, aimed at getting gross polluting vehicles repaired or off the road.

The remote monitoring program is a pilot project run by the South Coast Air Quality Management District to assess whether it is possible to, on a more sweeping scale, identify vehicles that are out of compliance and to try to figure out why so many cars fall into that category.

It isn't only junk heaps and classic cars that are fouling the air, but sometimes late-model vehicles that have racked up more than 100,000 miles. Some of these vehicles spew out more than 100 times the pollution of a properly functioning, compliant vehicle.

In fact, just 10% of vehicles produce more than 50% of the pollution, said Dean Saito, the agency's manager for the remote monitoring program. As tougher new pollution laws come into effect by 2015 and then 2023, the AQMD will tighten up on a lot of pollution sources.

One big source is cars that actually pass the smog tests that are required every two years for all but the oldest and newest vehicles. A significant fraction are polluting shortly after passing the test. A report last October by a little-known state agency -- the California Inspection & Maintenance Review Committee, a unit of the Department of Consumer Affairs -- found that 40% of the vehicles that failed a smog test and then passed after repairs were made to the emission control system were once again out of compliance just weeks or months later. In other words, the repairs are not fixing the root cause of the problems or the owners are somehow gaming the system, Saito said.

One scam is the use of "clean pipes," in which a smog test machine is hooked up to the exhaust pipe of a car different from the one that is supposed to be being tested. Another potential problem involves the quick fixes that correct excess emissions only temporarily. An example of that is the installation of a new catalytic converter that cleans up exhaust temporarily, but then becomes fouled by overwhelming engine emissions.

Here's where the smog spies come in. As cars accelerate down an onramp, the sensors measure the output of hydrocarbons, nitrogen oxide and particulates. The system also images the license plate. Only the dirtiest 1% or 2% of the vehicles are selected for the letters, under the current pilot project. And compliance is completely voluntary, since the vehicle owners can now ignore the invitation for subsidized repairs. In fact, many people don't want anything to do with the program, officials say.

The nice-guy approach may eventually give way to a tough-guy approach. AQMD has long-range plans to conduct remote sensing on a much larger scale, when far stricter measures will
be needed to meet future air quality standards. The idea, obviously, is to not allow problem vehicles to spew out excess pollution for months or years before the next smog test.

65. Dingell To Propose Carbon Tax

U.S. Rep. John Dingell, D-Dearborn, will propose a tax on the carbon dioxide emissions of U.S. industries as part of a broad-based effort to shift the debate on climate change to economy-wide efforts. Dingell, chairman of the House Energy and Commerce Committee, has been pushing an effort to reduce greenhouse gases that goes beyond the Capitol's focus on the auto industry and vehicle emissions. Such emissions from industry and cars are linked to global warming.

Dingell's office said he would soon release a draft summary of his carbon tax proposal. Dingell said in a statement this would give people a chance to directly weigh in. "The public is offering general ideas in editorials, radio call-in shows and blogs. I want to offer them a chance to go one step further and actually comment on a legislative proposal. I haven't done anything quite like this before in more than 50 years of service, but I think because of the complexity and importance of the issue this is right time to open up a public discourse on a carbon emissions fee bill," he said. "We all have a common goal and we have to remember we are in this fight against global warming together."

Dingell has been trying for months to convince Congress that automakers shouldn't be the only ones forced to reduce emissions. "Everyone must put something in the collection plate," Dingell told The Detroit News earlier this year.

66. Nova Scotia Moving Toward Cleaner, Greener Economy

Premier Rodney MacDonald has announced a new fleet vehicle policy that will be phased in during several months in an effort to reduce greenhouse gas emissions, cut fuel costs and educate employees to drive more efficiently. "We've set an aggressive goal for Nova Scotia – to cut greenhouse gases by 35 per cent by 2020," said MacDonald. "Cutting vehicle emissions must be a big part of that goal."

The province's fleet includes more than 2,300 cars, trucks, heavy equipment and off-road vehicles. When a vehicle is replaced, the government will consider longer term costs of both fuel and emissions with all new purchases, leases and rentals.

More than 25 per cent of Nova Scotia's greenhouse gases come from vehicles.

67. EPA on Track to Act on California Emissions Waiver

The Environmental Protection Agency is on track to decide by year's end whether to let California set its own stricter vehicle emissions standards to fight global warming, but will not
meet the state's demand for a decision this month, according to EPA's chief. "We're on track to meet the commitment to make a decision by the end of the year on the California petition," EPA Administrator Stephen Johnson said in a telephone interview to the Reuters Global Environment Summit. But Johnson said the EPA will not be able to give a decision by the Oct. 22 deadline set by California Gov. Arnold Schwarzenegger, who said he would sue the agency if it did not make a decision by then.

Schwarzenegger has argued that under the federal Clean Air Act, the EPA must act on the state's waiver request within "a reasonable time period," and the request has been pending for almost two years.

Johnson said the EPA is sifting through 100,000 comment letters sent in on the California petition, the most ever in the agency's four-decade history of reviewing petitions. "We are expeditiously, but very carefully, reviewing all the comments, and doing our analysis," he said.

Earlier this year, the US Supreme Court ruled that the EPA has the power to regulate greenhouse gas emissions that cause global warming, ordering the agency to reconsider its refusal to regulate carbon dioxide and other emissions from new cars and trucks that contribute to climate change.

68. California Says EPA Weighing Temporary GHG Waiver Approval

California officials say EPA is considering granting them a temporary waiver from the Clean Air Act allowing the state to implement greenhouse gas (GHG) regulations for automobiles until the federal government adopts its own regulations. It is widely expected EPA will deny the state standards, but the comments from the California officials offer some insights into the agency's possible strategy in dealing with the waiver request.

California officials say a possible middle-ground approach would allow them and the other states to go forward with implementing the GHG regulations, while the federal government maintains the right to preempt those requirements when national GHG regulations for automobiles are adopted. EPA and the Department of Transportation (DOT) are working on standards for carbon emissions from fuels and vehicles after the Supreme Court earlier this year ruled carbon dioxide is a pollutant under the Clean Air Act.

Sources say the California standards are likely to be more stringent than the upcoming federal rules, but EPA is expected to argue that a national policy would have a greater impact on reducing GHG emissions. Specifically, EPA is expected to argue GHG emissions, unlike criteria pollutants, are a global problem and nationwide curbs would have a greater effect on reducing these emissions than regulations adopted by California and a dozen states, even if those standards would impose tougher tailpipe limits.
EPA officials have publicly stated they are working on vehicle emission standards modeled on President Bush’s State of the Union message and an executive order issued in May that calls for a 20 percent reduction in gasoline use. Fifteen percent of the reduction would come from cleaner burning “alternative fuels.” The other 5 percent of the reductions would come from improved fuel efficiency of the light-duty fleet, which has been estimated to require a 4 percent annual improvement in fuel economy over 10 years, to 35 miles per gallon.

69. CARB SIP Targets Diesel Emissions Controls in 2008, 2009

Among the regulations to be adopted, to achieve upcoming U.S. EPA air-quality deadlines, includes mandating cleanup of existing heavy-duty diesel trucks. “This critical regulation, to be presented to the Board in mid-2008, will modernize diesel trucks and reduce emissions by requiring replacement or cleanup of the dirtiest trucks on the road, and will also include a program for out-of-state trucks doing business in California,” CARB said. Also targeted: marine port equipment and vehicles. “A myriad of measures take aim at reducing emissions from ships, trucks, harbor craft and other sources,” CARB said. “In October, CARB will consider requiring owners of commercial harbor craft to either replace old engines with newer, cleaner versions or add control technologies to clean up exhaust. In December, ARB will consider a regulation to provide alternative power supplies at ports so that ship auxiliary engines can avoid using diesel power while at dock. Also on the December agenda is a measure requiring retrofit or replacement of older heavy-duty diesel trucks that service ports.” CARB earlier this summer adopted an off-road diesel engine cleanup rule that will force “older, dirtier engines to be replaced by current models or retrofitted with emission control devices. Agricultural equipment will also be modernized and cleaned up, with the Board expected to consider regulation in 2009.”

70. Shipping Industries Urge Feds to Block L.A. Port Clean-Truck Program

Pacific Merchant Shipping Association (PMSA) and National Industrial Transportation League (NITL) have petitioned the U.S. Federal Maritime Commission (FMC) to block a clean-truck program developed by the giant ports of Los Angeles/Long Beach. The program would force port drayage truck companies to sign “concession agreements” that will make them buy new, ultra-low-emissions trucks and bar old, dirty diesel trucks typically operated by low-income owner-operator truckers who allegedly can’t afford new trucks.

While PMSA and NITL say they support the clean-air goals of the program, they claim that the Ports scheme illegally prevents owner-operators from participating in freight hauls.

The vessel, terminal and shipping companies point to a recent Ports-commissioned economic study that found that the clean-truck program would require an 80% increase in the cost of drayage, which probably wouldn’t happen because of timing schedule for the Ports’ clean-truck program. As a result, a severe shortage of drayage service could cripple Ports traffic, the study indicates.
However, California Air Resources Board (CARB) has a much more workable regulatory scheme that will result in replacing old, dirty Port trucks with cleaner, newer trucks over the next several years, PMSA/NITL said. CARB “is in the final stages of drafting a regulation that will reduce drayage truck emissions statewide, without the anti-competitive and disruptive effects associated with the Ports’ plan,” PMSA/NITL said.

Because the Ports’ scheme supposedly hinders – illegally – owner-operator competition, FMC must order the Ports to stop their clean-truck program and instead let CARB regulations do the clean-up job, the groups told FMC.

71. Environmental Groups Hit Toyota on Fuel Economy

Leading environmental groups pressed Toyota Motor Co to drop its opposition to the tougher of two fuel economy proposals in Congress, calling the automaker’s stance contradictory. In a letter to Shigeru Hayakawa, Toyota’s chairman and chief executive of North American operations, the Union of Concerned Scientists, the US Public Interest Research Group, the National Environmental Trust and other organizations said Toyota should support the higher standard since it makes the best-selling gasoline-electric hybrid, the Prius.

"Unfortunately, Toyota's recent lobbying in the US Congress is inconsistent with its global reputation as an environmentally and socially responsible company," the group's said.

Toyota, the global sales leader and big US manufacturers oppose a measure passed by the Senate in June that would require the US vehicle fleet of passenger cars, sport utilities, pickups and vans to average 35 miles per gallon by 2020, a 10 mpg improvement over today's standards. Automakers are concerned the proposed method in the bill for calculating fuel savings would hurt their businesses by effectively limiting production of pickups and sport utilities. Those vehicles have been big sellers, but are generally less efficient than cars.

The auto companies support a less stringent bill proposed in the House that sets a goal of 32 to 35 mpg by 2022.

Momentum has slowed in Congress for passage of energy legislation, including efforts to boost fuel economy to lessen dependence on foreign oil. There is no timetable for final action.

For decades, Toyota has built its business in the United States on efficient and reliable cars. But the company is now expanding its pickup production, taking sharper aim at a market dominated by General Motors Corp, Ford Motor Co and Chrysler LLC. GM, Ford and Chrysler have for years successfully fought meaningful increases in fuel efficiency and emphasized larger more powerful vehicles such as sport utilities and pickups.

Cummins announced last month that it won’t need to add any exhaust catalyst aftertreatment to comply with U.S. EPA’s ultra-strict 2010 limits on nitrogen oxides (NOx) for its biggest heavy-duty highway engines. But smaller, midrange engines will use urea-selective catalytic reduction (SCR) for the EPA 2010 NOx limits, Cummins said. According to company spokesman Louis Wenzler “The price of urea versus diesel in Europe has an economic advantage for urea. [However,] by 2010 in the U.S., it is fully expected that urea and diesel will be nearly equivalent in price. The trade-off of high urea usage vs. mpg advantage isn’t an economic advantage at EPA 2010 NOx levels.”

73. Cummins Explains How Diesels Can Achieve U.S. EPA 2010 NOx Limits with LNT

Only a few years ago, skeptics predicted that achieving U.S. EPA’s ultra-tough limits on nitrogen oxides (NOx) for 2010 heavy-duty diesel vehicles with a lean-NOx trap (LNT) would be near-impossible because of fuel- and lube-derived sulfur poisoning and catalyst thermal damage from repeated desulfation events. Even the relatively trivial amounts of sulfur remaining in ultra-low sulfur diesel (ULSD of <15-ppm) and remaining sulfur species in lube oil eventually can foul an LNT, slashing its NOx-reduction capacity, several studies have shown.

But smart research and clever engineering are proving that this problem can be largely overcome, as Cummins showed in a presentation to U.S. Dept. of Energy’s 13th Diesel Engine Efficiency & Emissions Research (DEER) conference. The presentation, “Development of a NOx Adsorber System for Dodge Ram 2007 Heavy Duty Pickup Truck,” explains how Cummins overcame many challenges to make an LNT practical for EPA NOx emissions and durability mandates.

Cummins was the world’s first (and so far, only) diesel engine maker to win EPA heavy-duty 2010 certification with an LNT. The Dodge Ram has been available commercially in the U.S. since spring 2007. Fundamental challenges to LNT NOx control included “developing a multi-component, multi-functional catalyst of at least three components, with different functions. The scheme would require both redox and acid-based catalyst chemistry and a sequentially-coupled process, including sulfur poisoning and removal,” as Cummins catalyst technology researcher Aleksey Yezerets explained.

Cummins has risen to this challenge, not only solving EPA 2010 NOx limits for the heavy-duty Dodge Ram, but also showing it can achieve U.S. EPA Tier-2, Bin-5 emissions limits for light-duty diesel vehicles, with either LNT or urea-selective catalytic reduction. EPA/CARB emissions limits can be achieved by a combination of a close-coupled oxidation catalyst, followed by the LNT, and finally a catalyzed diesel particle filter (DPF). Hardware keys to making this system work include an in-cylinder source of reductants and heat for aftertreatment system control. These are enabled by a Bosch 1800-bar common rail fuel injection system, a Cummins “next-generation” cooled EGR system and a variable geometry turbocharger, Yezerets showed.
The R&D included studying the trade-off between desulfation (de-SOx) and catalyst thermal degradation, understanding how much and what type of sulfur needs to be removed from the catalyst (and how best to achieve that), what type of desulfation reductant is most effective (and how to generate that), and the distribution of temperature and sulfur species across the catalyst. Key parts of the discoveries came from Cummins collaborative R&D with Pacific Northwest National Lab, Oak Ridge National Lab and catalyst maker Johnson-Matthey, with partial funding by U.S. DOE.

Investigators found that sulfur can exist on the NOx adsorber catalyst in different forms: chemically uniform (sulfate), and morphologically different (surface/bulk), Yezerets explained. These different sulfur forms have varying impact on LNT catalyst performance. “The absolute majority of sulfur species in the fuel get oxidized during the combustion event to yield SO₂,” Yezerets pointed out. “In our lab experiments, we simulate sulfur poisoning using only SO₂ as a model compound. Overall, we have no evidence to date that the form of sulfur in the fuel has any impact on the LNT operation.”

What’s more, “we have found no evidence of accumulating chemically different sulfur species on the adsorber catalyst at relevant conditions, i.e., sulfur accumulates on the adsorber almost exclusively in the form of the respective sulfates. However, depending on the conditions, these can be ‘surface’ or ‘bulk’ species. The former have a direct impact on dynamic NOx performance and are easier to remove. “However, once sulfur is tied up in the bulk form, it is more difficult to remove, but also has much less impact on the dynamic NOx performance,” he said.

Crucial to removing this “surface” sulfur periodically, without thermally damaging the LNT, is creation and employment of a proper reductant. Research has shown that hydrogen is especially useful for LNT desulfation, so the challenge becomes: how best to get hydrogen into the catalyst? Citing recent research at ORNL, Yezerets pointed out that “in-situ hydrogen generation may play a major role in deSOx (and deNOx) efficiency.” Such hydrogen can be produced via in-cylinder combustion, and “can be further produced on catalysts (e.g. oxidation catalyst on in-situ on the LNT itself) under the net reducing (rich) environment via a number of processes,” Yezerets pointed out.

While Cummins has already made great strides on LNT for diesel NOx control, “significant opportunities remain for further system optimization,” including “better understanding of the fundamentals of the components behavior (catalysts, sensors), and development of predictive models, which would allow for tighter integration.” Further laboratory and on-board diagnostics development also would help further optimize systems, he said.

74. Volvo Puts U.S. EPA 2010-Compliant Heavy-Duty Trucks Into Customer Fleet
Volvo has announced that U.S. fleet Talon Logistics is now testing five EPA 2010-compliant heavy-duty trucks using urea-selective catalytic reduction (SCR) for control of nitrogen oxides (NOx). Said Peter Karlsten, President of Volvo Trucks North America: “Through Volvo’s previous experience with SCR from other markets, we know that this is the best technology to achieve very low emission of nitrogen oxides and excellent fuel economy.” Volvo says it’s capitalizing on experience in Europe, where the company has delivered more than 100,000 trucks equipped with SCR. Volvo plans fleet tests of 11 of its U.S. EPA 2010 trucks with SCR this year and will “increase the number further during 2008,” the company said.

75. EPA Says Clean Air Settlement to Cost AEP Over US$4.6 Billion

In what the EPA called the single biggest environmental enforcement settlement in US history, Ohio-based AEP agreed to end an eight-year lawsuit brought by the federal government. “This is a landmark, an unprecedented case, in the annals of air pollution regulation in the United States,” said Granta Nakayama, assistant administrator of enforcement at the EPA.

AEP spokesman Pat Hemlepp disputed the US$4.6 billion figure and pointed out that the number did not appear anywhere in the consent decree filed in a US District court in Ohio on Tuesday. The 121-page settlement came the day that a trial was scheduled to begin. In its deal, AEP agreed to pay US$15 million in civil penalties and US$60 million in pollution cleanup costs to end the "new source review" case brought by the Justice Department in 1999.

AEP, whose fleet of coal-fired power plants forms the backbone of the Midwest's power grid, agreed to cut soot and smog emissions by 813,000 tons a year when the agreement takes full force in about a decade.

The 16 power plants have a total capacity of about 22,000 megawatts and comprise most of AEP's eastern fleet of facilities, located in Indiana, Ohio, Kentucky, Virginia and West Virginia. The government accused AEP of modifying those plants, many of which were built in the 1970s, to extend their lives without including equipment to remove sulfur dioxide and nitrogen oxides -- precursors to smog and acid rain. AEP has spent US$2.6 billion since 2004 to install pollution-control equipment at coal-fired plants in Kentucky, Ohio, Virginia and West Virginia, and will spend more than US$5.1 billion fleetwide by 2010 on emission controls, Hemlepp said. "We are doing these projects to comply with existing or upcoming environmental regulations, not because of some sort of requirement in the settlement agreement," he said.

76. DOE Moves To Identify Plug-In Hybrid ‘Value’ Beyond Fuel Savings

DOE, noting in its planning that plug-in hybrid electric vehicles (PHEVs) will need to provide more benefits than just increased fuel economy, is funding a consortium of electricity research and production groups to study and specify possible market scenarios, or “value propositions,” that encourage development of the next generation hybrid design. The “value propositions”
intend to promote commercially viable PHEVs and advance national goals of energy security and environmental protection.

The “Value Proposition Study” is designed to assess how market barriers to PHEVs can be overcome and to identify possible scenarios where PHEVs will have added value beyond fuel savings. It is being conducted by SENTECH, INC, Oak Ridge National Laboratory, General Electric Corporation, and the Electric Power Research Institute (EPRI), which is the research arm of the investor-owned electric utility industry. The study was kicked off in September and the first phase should be completed next spring.

“The overall objective of this project is to establish very early a viable business scenario in which PHEV's are economically viable,” said a source with SENTECH, INC. To that end, the study will “identify and evaluate value-added propositions for PHEVs in order to develop viable strategies for achieving levels of PHEV penetration and appropriate operating strategies that will help achieve national goals of energy independence, energy security, robust infrastructure, environmental protection, and economic stimulation,” according to the study project plan.

The project plan for the study notes that increased fuel economy will not be enough of a factor to offset the higher costs of PHEVs, and that other factors will have to be added for PHEV viability. “[T]he cost premium of a PHEV will likely exceed the fuel saved over a reasonable ownership period for the average driver,” the plan reads. PHEVs are more expensive than conventional hybrid-electric and gas-powered motor vehicles. “[Thus] to achieve commercial viability, the PHEV must provide more value than fuel savings alone.”

Specifically, the project plan lists many options that might increase PHEV value. Some of the options include a scenario where a PHEV can serve as a type of energy storage system. “Smart Meter” technologies are crucial to these particular scenarios, and in one example the plan envisions “communications and controls to enable [a] utility to charge and discharge PHEV batteries based on real-time marginal electricity costs...” The study notes that the technology to accomplish this does currently exist. Such a scenario will capitalize on increased PHEV battery capacity to adapt to the grid.

The project will also investigate the possibility of a utility, rather than consumers, owning or leasing the PHEV battery, as it could play an integral role in the electric grid. Another option foresees the use of PHEVs parked at facilities like hospitals and office parks “to augment local back-up power sources at the start of an outage.” The vehicle owner would be reimbursed with “premium payments” for the electricity provided.

The plan also calls for the investigation of transportation and infrastructure policy and developments that encourage PHEVs. “We've considered PHEV access to high occupancy vehicle (HOV) lanes,” said the SENTECH, INC source. The plan furthers to consider PHEV access to possible “all electric inner city zones.” The source notes that although serious debate on all electric city zones has not occurred in the U.S., “there's been considerable discussion in Europe.”
In a similar PHEV encouraging accommodation, the study will look into preferred parking locations, which might even have renewable energy recharging potential.

The value propositions touch on public policies, utilities, consumers and others parties and factors. Each of the four members completing the study represents a different element in the study. The plan calls for the investigation of vehicle capabilities, vehicle support infrastructure, and utility system designs that take advantage of PHEVs as a resource, and incentives to support the propositions.

The study has 3 phases, with each phase lasting between approximately 9 and 14 months. After each phase a critical “go/no go” decision is made on whether to move on to the next phase. The above options are being considered in the first phase of the study and some will be incorporated into business models. Three especially high priority business models will be identified and the highest priority case will receive a detailed business analysis. This will complete phase 1. The next 2 phases will consist of detailed business analyses and evaluations for different business models.

77. Bush: Kyoto Approach on Climate is ‘Bad Policy’

US President George W. Bush said that his administration's approach of emphasizing voluntary approaches to address climate change was working and he denounced Kyoto-style mandatory caps as “bad policy.” Bush's comments were the latest sign that his opposition to binding emissions caps remains firmly entrenched, even as he has made efforts to show he wants to be more engaged in the global debate on climate change amid sharp criticism from other countries.

"The fundamental question is whether or not we will be able to grow our economy and be good stewards of the environment at the same time," Bush said during a question-and-answer session after a speech on the US budget in Arkansas. "I'm interested in good policy. Kyoto, I thought, was bad policy," Bush said.

The critique of the 1997 Kyoto Protocol came days after former US Vice President Al Gore and the United Nations' Intergovernmental Panel on Climate Change were awarded the prestigious Nobel Peace Prize for their efforts to raise awareness about climate change. The Nobel win for Gore, who helped negotiate Kyoto, prompted speculation over whether it would add to pressure on Bush to shift his approach on global warming and accept the kinds of mandatory caps that many European countries view as necessary to tackle the problem.

Soon after taking office in 2001, Bush rejected the Kyoto Protocol, which sets limits on industrial nations' greenhouse gas emissions. But he has said he wants to play a significant role in helping to negotiate a successor to Kyoto, which runs out in 2012. Last month, the United States held a conference of major emitting countries on global warming. At the conference, Bush said he thought the United States could be a leader in the climate debate, but he found
himself isolated from many of the other participants as he pushed his idea of "aspirational" goals that individual countries set on their own and continued to reject tougher approaches.

Bush contends mandatory caps would hurt the US economy. "We're different from other countries in the world," Bush said. "Whatever we're doing is working because last year we grew our economy and the gross amount of greenhouse gases we put in the environment actually went down."

**78. British Columbia To Reduce Emissions, Conserve Energy Use**

The British Columbia government will introduce legislation this fall that would mandate a reduction in the Canadian province's greenhouse gas emissions to 33 percent below current levels by 2020, Premier Gordon Campbell said on September 28th. The government also plans to introduce legislation next spring to establish "hard" caps on greenhouse gas emissions as part of a "cap and trade" emissions trading system being developed through the Western Climate Initiative, Campbell said. The Western Climate Initiative is a collaboration between six Western U.S. states and two Canadian provinces to meet regional challenges created by climate change.

"Our target for 2020 is very aggressive, and it will challenge us all to meet it," Campbell said. "We intend to legislate the 2020 target, as well as a target for 2050. The bill will also require us to establish legally binding emissions reduction targets for 2012 and 2016," he said.

Further legislation planned for this fall would require all provincial government entities to be fully carbon neutral by 2010, and would require all public sector organizations, including school boards and health authorities, to produce annual public reports on their progress in achieving that goal, he said.

All government travel will be required to be carbon neutral, and emissions from government travel will be tracked, calculated, peer reviewed, and audited, Campbell said. Each metric ton of greenhouse gas emissions from government travel will be offset by a C$25 ($25) investment in a new British Columbia Carbon Trust, he said. The trust will then invest funds in valid offset projects across the province.

According to the premier, specific initiatives that will be pursued include:

- a legal requirement for greenhouse gas emissions reduction strategies and targets in all official community plans and regional growth strategies;
- new powers for municipalities to waive development charges as a way to promote "green" developments;
• a requirement that all new government buildings or facilities meet a minimum Leadership in Energy and Environmental Design Gold standard, or its equivalent;

• legislation to require the adoption of tailpipe emission standards equivalent to those in California, to be phased in between 2009 and 2016, as well as the adoption of standards equivalent to California's low carbon fuel content standards; and

• Implementation of a 5 percent average renewable fuel standard for diesel by 2010, and support for the federal government's target of increasing ethanol content of gasoline to 5 percent by 2010.

Campbell also committed his government to a further C$50 million ($50 million) investment in the purchase of new, "clean" buses by BC Transit, and an expansion of public transit systems across the province. The government also will undertake major infrastructure projects to expand bus service to the suburbs of Vancouver, British Columbia, and will create a new cycling network in the Fraser Valley, between the Pacific coast and the Cascade Mountains, he said.

"In the coming weeks, we will lay out our vision for transit," he said. "It will be on a scale and scope aimed at making our province a global leader in public transit. Today, the percentage of transit ridership in the Metro Vancouver region is about 12 percent. The leading cities of the world be they London, Paris, or Hong Kong, see ridership in the 20-25 percent range."

79. Canada's Implementation of Kyoto Challenged

Environmental group Friends of the Earth Canada has filed an application in the Federal Court of Canadaseeking judicial review of the federal government's alleged failure to respect legislation requiring reductions in greenhouse gas emissions. The application, filed on September 19th, seeks review of Environment Minister John Baird's failure to follow the Kyoto Protocol Implementation Act passed by Parliament in June 2007, which required publication within 60 days of a detailed plan for Canada's compliance with its Kyoto commitment, Chris Palliare, the lawyer who represents the group in the case, said in a statement. The government's plan, which was released in late August, clearly fails to meet the Act's requirements, he said. "We are simply asking the court to declare that the government is bound by the Act's requirements and to require the government to comply with it," he said. Canada's commitment under Kyoto is a 6 percent reduction in greenhouse gas emissions, from 1990 levels, by 2008-2012

80. Canadian Business Leaders Urge Immediate Action on Climate Change

The Canadian government should take immediate action on climate change rather than continue to try and seek a consensus approach that probably is impossible to achieve, the Canadian Council of Chief Executives said on October 1st. Enough is known about the science of climate change to recognize that aggressive action is needed on a global basis, and although
the scale of the challenge is enormous, it also offers “immense” economic opportunities for
Canadian business, the business lobby group said in a policy declaration prepared by its Task
Force on Environmental Leadership.

"We must act decisively to reduce our impact on the environment ... [and] climate change
represents the most pressing and daunting issue," the policy declaration said. "We share the
goal of slowing, stopping, and reversing the growth of global greenhouse gas emissions over
the shortest period of time that is reasonably achievable."

Canada needs a coherent national plan with shared goals for reducing greenhouse gas
emissions, but in the decade since the negotiation of the Kyoto Protocol, Canadian public policy
has produced only "grandiose gestures and sweeping promises" and little real impact, according
to the declaration, titled Clean Growth: Building a Canadian Environmental Superpower.

Individual companies and industry sectors have made considerable progress, but there is too
little effort among the various levels of government to develop a coordinated and coherent plan,
it said.

While the policy declaration does not propose specific targets for reductions in greenhouse gas
emissions, it implies that Canada’s commitment under the Kyoto Protocol to a 6 percent
reduction from 1990 levels by 2008-2012 is no longer practicable and should be replaced by a
more useful approach that takes into account the long lead-times for major capital investments
by energy-intensive industries, consumer initiatives, and infrastructure upgrading.

"Canadians have wasted valuable time in a prolonged debate about a national target for
greenhouse gas emissions that, whatever its original appeal is no longer realistic or achievable," it said. "We should be guided, not by short-term political expediency, but rather by what is in
Canada's long-term interest. ... We must start now, but we should be clear about the timeframe
necessary to accomplish the transition to a clean and low-carbon economy."

Targets can spur environmental progress, but to be effective they must be part of a policy
environment that keeps corporations healthy and profitable and that encourages and enables
increased investments in new technologies, the policy declaration said.

The overall policy framework must recognize competitive realities, and the federal government's
current ambitious targets for greenhouse gas emissions reductions--an 18 percent reduction in
emissions intensity over the coming three years and 2 percent annual reductions thereafter--
appear to exceed requirements by the "vast majority" of competitor industries in other countries,
it said.

And while emissions intensity targets make sense as a way to encourage Canadian firms to
become more energy efficient without penalizing their growth, the ultimate goal must still be to
achieve a substantial absolute reduction in greenhouse gas emissions, both in Canada and
globally, it said.
"To achieve such an overall reduction, governments must ensure that firms are not arbitrarily penalized in the short term, so that they continue to have the financial and technical capacity to make investments that both reduce emissions and improve productivity," it said.

The business lobby's policy declaration drew praise from Green Party leader Elizabeth May, who said on October 2nd that the business executives have "driven a stake through the heart" of Prime Minister Stephen Harper's climate change approach. May commended the group for its insistence on immediate and aggressive action and its acknowledgement that price signals such as emissions trading and environmental taxes can ensure that energy use reflects environmental costs.

"The Harper government rejects decisive action to cut greenhouse gas emissions, claiming that it will cause economic catastrophe," she said in a statement. "Canada's top businessmen are now advocating an aggressive package of climate change policies, exposing those dire warnings from the prime minister and Environment Minister John Baird for what they are -- fear mongering."

**ASIA-PACIFIC**

**81. Japan Seeks Tougher Emissions Limits For Farm, Construction Vehicles**

On September 20th, the Japanese Ministry of the Environment's key policy panel released draft regulations that seek to reduce emissions of particulate matter and nitrogen oxides from construction, farming, and other off-road specialty vehicles by approximately 90 percent from current levels by the middle of the next decade. The standards would be implemented in phases beginning in 2009.

The proposed regulations from the ministry's Central Environmental Council would slash particulate emissions from specialty vehicles by 88 percent to 93 percent between 2011-2013 by requiring the use of diesel-particulate filters. For nitrogen oxides, emissions from diesel specialty vehicles with power output exceeding 56 kilowatts (75 horsepower) would be cut by 80 percent to 88 percent between 2014 and 2015.

In fiscal year 2006, which ended in March 2007, specialty vehicles accounted for as much as 18 percent of Japan's total particulate matter emissions and 31 percent of total nitrogen oxide emissions, according to the Environment Ministry's announcement. Over the years, specialty vehicles have come to represent greater portions of total particulate and nitrogen oxide emissions because standards for registered diesel truck and bus emissions have been toughened steadily in response to public criticism about government policy on diesel vehicles.
In February, the Central Environmental Council recommended the introduction of stricter diesel motor vehicle emission regulations under the so-called Nitrogen Oxide (NOx) Law, to put in place what it said would be the world's toughest standards by 2009. The Ministry of the Environment is in the final process of amending its ministerial directive under the NOx law, and the Ministry of Land, Infrastructure and Transport is amending similar directives, for enforcing the new regulations in 2009, according to an Environment Ministry official.

82. South Korea to Toughen Auto Emissions Standards

On September 25th, the Ministry of Environment announced a set of revised automotive emissions standards aimed at closing South Korea's "one-to-two-year gap" with the European Union and the United States in the area of vehicle emissions control. The tougher requirements will be incorporated into the rules under the Air Quality Preservation Act for phased enforcement from January 2009, beginning with the same requirements as California's fleet average emissions targets for new gasoline cars. New diesel passenger cars should meet the European Union's Euro 5 next-generation emissions requirements, starting in September 2009. Euro V compliance will be required for diesel trucks and buses, effective from January 2009. The ministry estimates a combined 58,000-ton reduction in carbon monoxide, nitrogen oxide, hydrocarbon, and particulate matter emissions from tailpipe exhaust between 2010 and 2015 under the revised emissions standards.

83. Japan Begins Sale of Ethanol-Mixed Gas

On October 9th, Japan began experimental retail sales of E3 gasoline, a cellulosic ethanol derived from waste wood, in the western city of Osaka, Japan. The five-year national project is aimed at reducing the country's greenhouse gas emissions.

Sales of E3, an ethanol/gasoline blend made up of 3 percent ethanol, at two Osaka gas stations to the owners of 101 vehicles that had volunteered to take part in the experiment got off to a slow start, according to Takao Korai, an official with the Osaka municipal government's Global Environment Division. "[T]he stations seemed to have sold less than 100 liters altogether," Korai said. He emphasized that Osaka, which was asked to cooperate in the project by the Japanese Ministry of the Environment, expected sales to pick up over coming weeks because "the automakers have proven that current Japanese cars can use E10 or even higher ethanol-blended gasoline." The city plans to ask up to 15 gas stations and more vehicles to take part in the program over the coming year to sell 47,000 kiloliters (12.4 million gallons) annually.

The experiment is part of the Japanese government's project to blend a half million kiloliters (132 million gallons) of ethanol in gasoline by the end of 2010 to reduce Japan's carbon dioxide emissions by 0.6 percent from the current level of overall greenhouse gas emissions. The Japanese oil industry had committed to use 210,000 kiloliters (55.5 million gallons) of ethanol, leaving the remaining 290,000 kiloliters (76.5 million gallons) to be earmarked for other sectors.
The Environment Ministry allocated $6 million for the project for fiscal 2007, which ends next March.

Although some ethanol blends currently sell for the same price as regular gasoline, Korai said the Environment Ministry; the Ministry of Economy, Trade and Industry; the Ministry of Land, Infrastructure and Transport; the city of Osaka; and other institutions have all asked the Ministry of Finance for tax relief for the ethanol-blended portion of E3, as part of fiscal 2008 tax reforms.

Since April 2007, the Japanese oil industry has been selling bio gasoline in the Tokyo area that is mixed with 7 percent of a fossil-fuel additive, known as ethyl tertiary butyl ether (ETBE). Sales of ETBE ethanol--the bulk of which is imported--are progressing smoothly, according to oil industry data, although the Japanese government currently subsidizes sales of ETBE-mixed gasoline that are at or below break-even costs.

The oil industry argues that, unlike ETBE, cellulose E3 degenerates when mixed with water.

"For consumers, whether it is derived from cellulose or ETBE, bio gasoline is the same gasoline," Korai said. When it comes to cost, however, Korai said cellulose-based E3 might have a cost advantage because the materials for cellulose E3--waste wood from disassembled houses and other buildings--are essentially available for free. Eventually, the city might experience using trees that are cut and dumped in forests, he said.

Cellulose ethanol is produced by BioEthanol Japan Kansai Co.--invested by Taisei Construction Corp., a top general contractor--and Marubeni Corp., a trading company. The mixture is blended by Chusei Oil Co. of Okayama, in western Japan.

The goal of the biofuel initiative to reduce carbon dioxide emissions by 0.6 percent from the current levels is only a small percentage of Japan's overall commitment under the Kyoto Protocol to reduce greenhouse gas emissions by 6 percent from 1990 levels by 2010-2012. As a result, several Japanese industries, jointly with the Environment Ministry and the Ministry of Economy, Trade and Industry, aim to further reduce carbon dioxide emissions by setting more aggressive, voluntary reduction targets--with an average 30 percent reduction in current average target, according to an official of Nippon Keidanren, a Japanese Business Federation.

84. **Beijing Enjoys Most "Blue Sky" Days In September In Seven Years**

The "blue sky" days, or days with fairly good air quality, reached 25 in Beijing in the past month, setting a record in seven years, according to local environment authorities. The figure means six days more than the same period last year, according to a spokesman with the Beijing Environment Protection Monitoring Center. He attributed the increase mainly to the frequent but weak cold air activities, which offered a favorable condition for atmospheric diffusion.
By the end of September, Beijing had registered 186 "blue sky" days this year, one day more than the corresponding period of last year, he said. The city still needs 59 such days to meet this year's goal of 245 days, he added.

The Chinese capital launched a drive "Defending the Blue Sky" in 1998, when it only had 100 days of "blue sky". Last year, Beijing saw a total of 241 "blue sky" days.

As the host of next year's Olympic Games, Beijing has been working on reducing environmental pollution and improving air quality to ensure "Green Olympics." In one move, the municipal government has urged local residents to take public transport instead of driving private cars by axing bus and subway fares, hoping to reduce pollution of auto exhaust. The city is also considering a traffic ban during the period of Olympics, in which drivers with even-numbered and odd-numbered license plates, excluding taxis, buses and emergency vehicles, will be told to stay off the roads on alternate dates or face fines.

During a four-day test of the traffic ban launched from Aug. 17 to 20, about 1.3 million cars were barred from the city roads each day and the amount of pollutants discharged was cut by almost 6,000 tons, according to a report released by Beijing Municipal Environmental Protection Bureau.

**85. PetroChina To Invest US$1.3b In New Energy By 2010**

PetroChina, the country's largest oil and gas producer, will invest 10 billion Yuan (US$1.3 billion) in building facilities for new energy production by 2010, a senior company official said. Hu Wenrui, vice president of PetroChina, told a recent forum that the investment is expected to reap three million tons of oil equivalents in new energy resources production capacity. "This will help guarantee the energy safety of the fastest growing economy and the world's largest energy consumer only second to the United States," he said.

The oil giant's business on new energy sources covers non-conventional energy including coal-bed methane, oil shale, oil sands and renewable energy such as wind and solar power, bio- and geothermal energy.

PetroChina's output of coal-bed oil, fuel ethanol and biodiesel and that of shale oil and sand oil are expected to account for 40 and 20 percent respectively of the nation's total by 2010, Hu said.

He added the company will also take advantage of its resources, technology and funds to closely follow the latest developments in hydrogen energy and natural gas hydrate.

**86. Beijing Opens New Subway To Ease Road Congestion**
Beijing has opened a new subway line in a bid to boost public transport and ease road congestion ahead of the Olympics. Beijing's No. 5 subway line, which runs through the heart of the city from north to south, opened at 2:00 p.m. on Sunday, when the week-long National Day holiday ended. The 27.6-km line, after nearly five years' construction, is installed with 23 stations and runs from Tiantongyuan North Station in northern Beijing's Changping district to Songjiazhuang Station in southern Fengtai district.

"The launch of the No. 5 subway line indicates that Beijing's rail transport is on a track of fast development," said Liu Qi, a member of the Political Bureau of the CPC (Communist Party of China) Central Committee and secretary of the CPC Beijing Municipal Committee, at the opening ceremony. "It is of great significance for the city to ease traffic pressure, provide easier transport for the public, speed up construction of Olympic infrastructure, and ensure a high-level Olympic Games," he said.

Equipped with a wireless communication network, live broadcasts will be provided on televisions installed in each subway car and passengers will never lose the signal on their mobile phones.

The subway cars are wider and taller than the ones operating on the older lines and are designed to reach speeds of 80 km per hour. Elevators designed to aid disabled people have been installed.

Construction of the new subway line began in December, 2002 and involved 12 billion Yuan (about $1.6 billion) in investment. Prior to this, Beijing had four subway lines with a total mileage of 114 km transporting about 1.15 million passengers daily, 15 percent of the total commuters. According to the municipal government, Beijing will add three subway lines next year and the total mileage will reach 200 km.

The launch of the new subway line is among Beijing's recent efforts to boost public transport, ease road congestion and improve air quality ahead of the Olympics.

Also on Sunday, a new subway pricing system was adopted, cutting subway fares by about 30 percent. Now a one-way ticket costs just two Yuan (27 U.S. cents), nearly the price of a bottle of purified water, no matter how long one travels and how many times one transfers between lines. "The urban public transport should be given priority...and the related services should be improved consistently," Chinese Vice Premier Zeng Peiyan told the opening ceremony.

Local people lined up in front of the ticket offices of the new subway line on Sunday morning to enjoy the new service first or just to buy a commemorative ticket.

"I used to spend more than an hour and change subway lines twice for work, but now I can save 20 minutes and only need to change once with the opening of the new line," said Wang Jing, a local resident. "Besides, I can save one Yuan each time," she said.
87. China is No Place for Electric Cars Says Toyota

Japanese carmaker Toyota is working to improve its hybrid cars and develop electric cars for the future, but an official said that these vehicles would not help reduce CO2 emissions in China. "In France, 80 percent of electricity is produced by nuclear stations so if electric cars replace fossil fuel cars then you have a clear reduction in the emission of CO2," said Tatehito Ueda, a managing officer at Toyota Motor Corp. "But in China they make electricity by burning coal, so China is not the place for electric cars," he told the Nikkei International Automotive Conference in Tokyo.

Toyota has introduced a so-called 'plug-in' hybrid vehicle -- in which the electric part of the engine can be charged up from the electricity network -- in France in partnership with EDF and will introduce this elsewhere as well. The vehicle is based on its Fuel Cell stack technology, but Ueda said a lot of issues needed to be resolved to make this a mass technology, both in infrastructure and in vehicles.

In the meantime, improved fuel economy through reduced running resistance, or friction, and an improved power train can cut emissions. Software can help make mechanical actions more precise and reduce fuel consumption, he said.

88. NRDC Expert Says China Would Follow US Lead on Climate

China would soon follow the US lead if Washington agrees to tackle its emissions in the next few years because China's government takes the threat of global warming more seriously than the United States does, according to a prominent climate expert. "My impression is that the national government -- top level ministry officials -- in China regard the threats of global warming to their country with a much higher level of seriousness than their counterparts do here in the United States," said David Hawkins of the environmental group National Resources Defense Council.

Hawkins, head of the group's climate center, spoke by telephone to the Reuters Environment Summit in New York.

If the United States agrees to cut emissions deeply with a baseline that gets tougher over time, it would spur US manufacturers to build low-emissions technologies like alternative energy and coal plants that store carbon dioxide underground. It could then market those technologies to the world, forcing China to act. "The biggest carrot is to have the US to take a leadership role," he said. "Then countries like China are going to say, 'What does the United States know that we don't know?' and agree to their own cuts," said Hawkins.

Hawkins is based in Washington but visits China often, meeting with government ministers heading the country's science and technology, environmental protection, agriculture, and development reform agencies. He said they are very concerned about the possibility that global
warming will lead to drastic cuts in water for agriculture. "They are very much aware that the Tibetan glaciers are threatened and they cannot count on the same water supply to western China from those glaciers 20, 25, or 30 years from now as they get now," he said. The drought possibility threatens China's food supply as well as its political stability because agriculture provides jobs. "It's a huge threat to China as a stable growing nation," he said.

Rajendra Pachauri, the chairman of the UN's climate panel the Intergovernmental Panel on Climate Change, has said that a quarter of a billion people in China alone could suffer from less glacier melt from the Himalayan Hindu Kush mountains for water supplies.

89. **Cummins Inks Diesel Engine Venture with Vietnam**

On September 28th, Cummins announced that it has signed a Memorandum of Understanding with Vietnam Motors Industry (Vinamotor) to create a 50-50 joint venture to produce on-highway diesel engines in Vietnam. “Vinamotor, a government-owned company, is the largest commercial vehicle producer in Vietnam, which currently has no local engine production,” Cummins said. “The MOU outlines the parameters of the joint venture, which is contingent on the satisfactory results of a feasibility study, which Cummins expects to be completed in January 2008. Financial terms of the deal have not been set and no timetable for completing the joint venture agreement has been established. Under the terms of the MOU, the joint venture would take a phased approach to producing Cummins-designed engines in Vietnam: Initially, engine kits will be imported for assembly and distribution in Vietnam with local components ultimately being used in production as the supply base in Vietnam develops.”

90. **Hong Kong Seen Moving to Euro-5 Standards by 2011**

According to a report from the *South China Morning Post*, Hong Kong “is already considering bringing in tougher [Euro-5] standards for new vehicles,” initially covering new vans, light buses and trucks, starting in 2011. Quoting principal environmental protection officer Mok Wai-chuen, the report said: “We have been following the timetable of the European Union closely in tightening emission standards.” Euro IV has already applied to new trucks and buses registered in Hong Kong since October 1. “New World First Bus and Citybus will add the first 28 Euro IV buses to their combined fleet of 1,600 by November. Kowloon Motor Bus, which runs more than 4,000 buses, bought its third Euro IV vehicle in February,” the report added. “KMB principal engineer Kane Shum Yuet-hung said the company had tentative plans to run Euro V buses in 2009.”

91. **Toyota Fuel-Cell Car Covers Osaka-Tokyo on One Tank**

Toyota Motor Corp has announced that its improved FCHV zero-emission fuel-cell car completed a road test from Osaka to Tokyo, covering 560 km (350 miles), on a single tank of hydrogen. The latest version of the FCHV features a high-pressure tank of 70Mpa that can store
double the amount of hydrogen as its previous fuel tank, increasing its cruising range. Two cars were tested and both completed the trip, the automaker said.

Most big automakers are working on developing fuel-cell vehicles, which use a chemical reaction between hydrogen and oxygen to generate electricity and emit only water. But high costs, infrastructure and storage safety issues mean they are years away from practical use.

With the new tank and high-performance fuel-cell stack, the FCHV has a potential single-fuelling range of about 750 km (466 miles), making it 25 percent more fuel-efficient than earlier versions, it said.

92. Thai Auto Sector Pins Hopes on Little Green Cars

Plans by Toyota and Honda to make fuel efficient "eco" cars in Thailand and a new small car plant announced by Ford and Mazda suggest government incentives to diversify the sector are finally paying off. The announcements come at a crucial time for an industry hit by falling exports, sluggish domestic sales and competition for foreign investment from neighboring rivals such as Vietnam, and will provide a boost for local parts suppliers like Thai Stanley Electric and Somboon Advance.

Analysts say Thailand might become a major regional exporter of small passenger cars, which are in high demand due to soaring oil prices and concerns about the environment. "It's a pretty significant development for the industry," said John Bonnell, a Bangkok-based analyst for Automotive Resources Asia.

Thailand built almost 867,000 light trucks last year, exporting half to Asia and Europe. By comparison, only a third of the 299,000 passenger cars made last year were shipped abroad.

Thai governments have struggled for years to convince global carmakers to invest in export-oriented plants for small sedans, including the so-called "eco" car project which stalled in 2004 amid fears it would bleed sales from other vehicles. Bangkok revived the "eco" car this year, offering tax breaks, duty exemptions and other incentives if manufacturers invested a minimum 5 billion baht (US$146 million) and produce 100,000 by the fifth year of operations.

Automakers have until Nov. 30 to submit plans to the Board of Investment (BOI), which says the car must consume no more than 5 liters (1.1 gallons) of fuel per 100 km (60 miles) and meet strict international pollution standards. Among the first to be approved was Honda Motor Co, which said this month it planned to build a new 6.7 billion baht "eco" car plant in the central province of Ayudhya. Toyota Motor Corp, the world's biggest automaker, plans to use existing plant capacity for its "eco" car, which could be an adapted Vios or Yaris model rather than a new car.
Although technically not an "eco" car, about 80 percent of the 100,000 subcompacts to be built at a new US$500 million plant announced by Ford Motor Co and Mazda Motor Corp last week will be exported throughout Southeast Asia. The factory, which will boost the annual capacity of their Thai joint venture to 275,000 vehicles, will be built alongside their existing truck plant in the eastern province of Rayong.

"Eco cars are the future," said Apichart Leeissaranukul, an executive at car lights maker Thai Stanley Electric which supplies Honda, Toyota and Ford. "Car makers expect sales growth to fall this year. We are working just to keep our sales close to last year," he said.

Auto firms have had stellar sales growth in Thailand since the late 1990s, especially light trucks widely used by rural Thais, a reflection of the country's large farm sector. But domestic sales suffered as consumer confidence plunged during a political crisis in 2006 which ended with a bloodless military coup against Prime Minister Thaksin Shinawatra.

Auto exports, up 23 percent in the first eight months of 2007, are expected to take a hit next year if the baht which has risen 5 percent this year after surging 14 percent in 2006, continues to rise as some analysts predict. "I'm not certain we will have good auto exports next year with the baht is still strong," said Apichart, whose company generates half its revenues from exports. "The good exports you see this year reflect the baht in early 2006, which was much weaker than now," he said. "The effect of strong baht this year should be reflected in orders for 2008."

Apichart and other parts makers also worry about Thailand's ability to compete against lower-cost rivals such as Vietnam.

93. China to Consider New Tax Policy To Encourage Use of Fuel-Efficient Cars

China will consider a new tax policy to steer drivers toward fuel-efficient cars to curb the country's growing problem of air pollutant emissions, the head of the country's economic planning ministry said on September 7th. Speaking at a gathering organized in Dalian by the World Economic Forum, Zhang Xiaqiang, vice chairman of the National Development and Reform Commission, said the central government is aware it needs to act to quell China's emissions problem.

"The government shouldn't simply block the demand of citizens to buy cars," Zhang said, according to the transcript of his talk. "But we can set up a framework to encourage people to use smaller, more energy-efficient cars, perhaps by using different tax rates. I think we're at an early stage, and in the future we will try to do this much more effectively."

Zhang's comments came just months after a Dutch environmental group announced that China had surpassed the United States as the world's leading producer of carbon dioxide emissions. Though China rejected that assertion, officials acknowledge they have a major problem and the country's rapid economic growth is contributing to climate change.
In a discussion at the forum, Zhang said government leaders want to establish policy to encourage consumers to buy cleaner cars. Already, China’s newer cars on average achieve greater fuel-efficiency than those sold in the United States, according to industry data.

In September 2004, China adopted new fuel economy standards that sorts cars into different categories based primarily on weight. By 2008, cars in the lightest vehicle category will be expected to average 43 miles per gallon, while the heaviest cars will be expected to average 21 mpg, according to an analysis of those standards published by the World Resources Institute in Washington, D.C. The U.S. standard for cars is 27.5 mpg.

94. China Urges Investment in Pollution Control Projects

China will encourage investment in pollution control projects to help the country meet its environmental goals, according to an environmental policy blueprint provisionally approved by the State Council. In principle it approved an environmental plan for the five years through 2010, urging industrial restructuring to conserve resources and requiring companies to adhere to environmental standards to help reduce the damage to its water supplies, coast and air.

"A mechanism should be established to encourage government, enterprises and non-government forces to invest in pollution control projects," said the announcement that led the evening radio and television news on the day it was released. It also called for an end to the bureaucratic fighting that has allowed many polluters to simply ignore the rules that are on the books.

"The most important job is to prevent pollution," the circular said. "Governments and ministries should better coordinate to deal with pollution problems that cross administrative and regional boundaries. And companies should adhere to existing laws when expanding or building new plants, while addressing outstanding pollution as quickly as possible."

The five-year plan includes "specific measures" to reach previously announced targets to reduce energy consumption per unit of economic output by 20 percent and major pollutant discharges by 10 percent by 2010.

The State Environmental Protection Administration is gradually gaining clout as Beijing becomes more aware of the social, health and economic cost of unchecked pollution. But local governments’ eagerness to support projects that bring taxes and jobs, added to authorities’ inability to enforce laws outside their own jurisdiction, has allowed highly polluting projects to continue unabated.

95. Polluted Beijing Voted China’s Most Beautiful City
Beijing has been chosen as China's most beautiful city. The host to next year's Summer Olympics beat 558 mainland cities as well as former British colony Hong Kong, which came in second in the survey by the China Institute of City Competitiveness, a non-profit organization.

Southern boomtown Shenzhen came third for "its role as the pioneer of China's opening up and reform policies", while glitzy Shanghai got fourth place "for being the country's financial centre", the official China Daily reported.

Institute chairman Gui Qiangfang said the assessment took into consideration Beijing's design, infrastructure, architecture, culture and natural beauty. "Factors including the preservation of historical monuments, forest coverage, air quality, the transportation network, city life, public space and GDP were also considered," the newspaper said, with no hint of irony.

The result might come as a surprise to many visitors to China, home to clean and leafy cities such as Qingdao and Hangzhou in the east and the picturesque walled ancient capital of Xi'an in the north.

Historic sites in Beijing, often clouded by a toxic mix of construction dust, car fumes and factory emissions, have long been under threat, but the situation has become still direr as the city is feverishly refurbished for next year's Olympics. The ruling Communist Party ordered the confiscation of many ancient buildings to accommodate new state organs after it took power in 1949. Most of Beijing's ancient city walls were also destroyed in the first years of Communist rule. More recently, breakneck development has been claiming what remains of historic "hutong" alleyways and architectural icons.

96. China Reportedly To Encourage Greater Use Of Diesel Engines

China is encouraging more automakers to produce diesel-powered vehicles in a bid to improve air quality, the South China Morning Post reported, citing a senior economic planning official. 'Diesel engines should be widely used in passenger vehicles as quickly as possible,' National Development and Reform Commission (NDRC) vice-minister Zhang Guobao said at a vehicle industry conference during the World Economic Forum in the northeastern Chinese city of Dalian.

The country plans to encourage use of diesel engines meeting Euro IV emission standards by early next year, the Hong Kong newspaper said.

97. Japan Seeks Funds to Introduce Mode For Measuring Ships' Fuel Efficiency

The Ministry of Land, Infrastructure, and Transport has requested fiscal year 2008 budgetary outlays to begin studies for introducing a fuel efficiency measuring mode in a few years that could reduce vessel carbon dioxide emissions, according to the ministry’s fiscal 2008 budget
request. The mode is intended to urge engineers to design fuel-efficient ships and enable shipbuilders and owners to see "oceangoing mileage," like automobile mileage, one official said.

The ministry is seeking about $800,000 for conducting first-hand research and development over the next three years that would culminate in a formal introduction of the mode, ministry officials said. Japan would be the first member country of the International Maritime Organization (IMO), a United Nations agency, to introduce such a vessel fuel-consumption mode.

The oceangoing mileage mode would test fuel consumption of ships cruising during high tide, against-winds, loads, and other modes, according to ministry officials. A large oil tanker cruising at 14 knots (25 kilometers per hour) would consume 80 to 90 tons of heavy fuel oil per day, and a large-container ship cruising at 25 knots (46 kilometers) would consume 220 tons, one official said.

Since carbon dioxide emissions, as well as noxious gases released from oceangoing ships, are major causes of global warming and air pollution, IMO is moving to set certain emission standards. It is regulating releases of ship waste, but IMO has yet to introduce regulations on carbon dioxide.

98. Indian Government To Issue Oil Bonds Worth Rs 24,000 Crore

Speaking to the media on the sidelines of a seminar on biofuels, petroleum secretary M S Srinivasan said, “A joint exercise by the oil and finance ministries is on to estimate the losses of marketing companies on selling petrol, diesel, kerosene and domestic LPG. The whole exercise would take not more than 10 days in total.” Srinivasan said, “We are expecting oil bonds of up to Rs 24,000 crore to compensate oil marketing companies (OMCs) this fiscal. The Government is most likely to issue oil bonds worth Rs 12,000 crore by October 15 before auditing is due. We are also apprising the Cabinet on the issue. Cabinet approval is required to issue oil bonds.”

An Indian Oil official said, “In the present scenario, the oil marketing companies are losing Rs 3.35 per liter on petrol, Rs 5.75 per liter on diesel, Rs 14.90 per liter on kerosene and Rs 178.15 on sale of every domestic LPG cylinder.” The skyrocketing crude oil prices have increased the losses of oil marketing companies this month.

The oil ministry has projected that the oil marketing companies, including Indian Oil, Bharat Petroleum and Hindustan Petroleum would lose about Rs 52,000 crore on sale of petrol, diesel, kerosene and domestic LPG this fiscal.

During the first quarter of the financial year, the oil marketing companies lost Rs 12,900 crore, including Rs 6,700 on sale of domestic LPG and kerosene and Rs 6,200 crore on sale of petrol and diesel. The Government had issued oil bonds worth Rs 24,121 crore to the oil marketing
companies to compensate for half the loss on sale of petrol, diesel, kerosene and domestic LPG.

With crude prices touching a record $81 a barrel, petrol and diesel prices are likely to be increased, but a decision on the issue will be taken after political consultations. The basket of Indian crude oil touched an all-time high of $75.37 a barrel recently, widening the losses public sector oil firms suffer on sale of petrol, diesel, domestic LPG and kerosene at prices below the cost.

"Petroleum Ministry has moved a Cabinet note for raising fuel prices but a decision will depend on what allies of the ruling alliance say," an official said. Allies like RJD had voiced opposition against raising petrol and diesel prices and that may be the apparent reason why the ministry has not mentioned about the hike sought.

Indian Oil Corp., the nation's biggest refiner, and its counterparts are seeking a 15 percent increase in retail prices of diesel to cut losses.

Indian state-run refiners want a 4.68 rupees a liter ($0.11) increase in diesel prices and a 6.7 percent, or 2.90 rupees, a liter rise on gasoline, Oil Minister Murli Deora told parliament in New Delhi. The companies are seeking a nearly three-fold increase in kerosene prices and 174.75 rupees on a 14.2-kilogram cylinder of liquefied petroleum gas, he said.

Indian Oil and its state-run counterparts have to sell gasoline, diesel and other fuels at government-capped prices to control inflation. The refiners haven't been allowed to raise prices this year even as crude oil costs surged to a record.

99. Coming Soon! Hithane Vehicles On Indian Roads

A two-year project that will enable light commercial vehicles, cars and auto rickshaws to run on a blend of hydrogen and CNG was launched on Wednesday. An MoU was inked by the ministry of new & renewable energy (MNRE), Society of Indian Automobile Manufacturers (SIAM) and Indian Oil Corp for the purpose.

This project would develop an optimal mix of hydrogen and CNG (called hithane) by experimenting with up to 30 per cent hydrogen mixed into CNG.

Other than Indian Oil, the project involves five vehicle manufacturers: Ashok Leyland, Bajaj Auto, Eicher Motors, Mahindra & Mahindra and Tata Motors.

At the end of the project, which is scheduled to be completed in 24 months, detailed recommendations would be made. The project entails investment of between Rs 10-12 crore, of which Rs three crore would come from the Centre and another Rs 3 crore from Indian Oil Corp. The remaining money would be put in by the five vehicle makers.
Three LCVs, one car, one utility vehicle and two- and three-wheelers would be developed and tested with different blends of hithane to arrive at an optimum blend; this would enable existing vehicle fleets to be suitably modified for using hithane instead of pure CNG.

SIAM secretary general Dilip Chenoy said that world over, vehicle makers are looking for ways to use hydrogen fuel in new products, but this project seeks to develop for the first time ever a CNG-hydrogen mixture for use in the existing on-road fleet of vehicles with minimum modifications in the engine and engine components.

The participating companies are providing seven different types of vehicles for the purpose: three light commercial vehicles, two three-wheelers, a sports utility vehicle and a passenger car. Each vehicle would be first tested on blends of between 10-30 per cent hydrogen to get to the optimum blend that reduces emissions and achieves the desired fuel supply sustainability. This blend will be used to modify vehicle engines for optimum performance with the new fuel.

100. GE In Race To Set Up Diesel Loco Unit In India

The public-private partnership (PPP) initiative of the railway ministry is going ahead full steam, with US giants GE and EMD among the front-runners for setting up a diesel locomotive unit in Marhowra in Bihar. The ministry has floated a request-for-proposal (RFQ) for the unit.

While these two companies are among the first lot of players to have shown an interest in the project, Bombardier, Alstom and Siemens are planning to bid for the railways’ other upcoming electric locomotive unit in Madhepura in Bihar. The RFQ for this unit is expected in October. The private company would have a 74 per cent stake in the units while the ministry would hold the rest.

Railway Minister Lalu Prasad had announced setting up of three locomotive and coach units in the railway budget. The process for setting up the third unit, in Rai Bareli, would begin next year, said sources.

Sources say the ministry, however, is yet to decide the technology for the new locomotives and their capacity. GE and EMD are world leaders in diesel locomotive technology while Bombardier, Alstom and Siemens are known for their electric locomotives.

Indian locomotives’ capacity is 3,800 horse power while the international standard is 6,000 horse power. Sources said once these units were set up, the ministry would look at manufacturing high capacity locomotives also.

The companies, on their part, are happy at a chance to own a majority stake in Indian locomotive units. A Bombardier official said this would give them a chance to showcase their cutting edge technology in India.
GE Infrastructure CEO Pratyush Kumar said apart from giving them an opening in the Indian market, this would give them a chance to convince the ministry about using their signaling technology as well.

A ministry had a couple of years ago, held discussions with the GE executives on using the company’s signaling technology. Kumar hopes things will open up once the units come up.

The companies are also looking at the railways’ freight corridor project, which will require 600 powerful locomotives.

Another signal that the railway ministry is opening up to private partnership is a recent MoU between steel player Somani Group and Germany’s Thyssenkrupp GfT Gleistechnik.

The Somani Group would now market the German company’s equipment, like railway switches and rail sleepers, to the railways. The idea is to provide the railway ministry more options for acquiring state-of-the-art railway equipment.

**101. DaimlerChrysler’s Pan-India Drive**

The first bus from DaimlerChrysler India Ltd will be an inter-city coach that will operate in a segment similar to Volvo. The buses will be assembled at its plant at Chikhali where a new assembly line has been installed, and be driven up to its partner Sutlej Motors, Jalandhar, for building the body.

Dr Wilfried Aulbur, Managing Director and CEO, DCIL, said that only one model would be introduced by early 2008, and the company was looking at a slow entry. “We want to first understand the product and the market, and how we can adapt them,” he said, adding that the investment in the new plant at Chakan, and the new assembly line was €50 million.

Flagging off an entourage comprising its entire diesel car portfolio for the ‘Mercedes Benz India Trail’, Dr Wilbur made a strong case for diesel as a fuel. “Today’s modern diesel passenger cars reduce exhaust emissions by 70-80 per cent, throw up 20-30 per cent lower greenhouse gases than petrol, and are much more efficient to run.”

With a fleet of six diesel models - S-Class, C-Class, E-Class, M-Class, Bio-diesel C-Class and the Viano - accounting for 50 per cent of its passenger car sales, he said, “We are finally where we want to be.”

The pan-India drive covering 40,000 km and passing through Goa, Bangalore, Chennai, Hyderabad, Mumbai, Ahmedabad, Udaipur, Pushkar and Jaipur before ending in Delhi on October 10, would “demonstrate the reliability of diesel cars,” he added.
102. Study Says Hong Kong Must Cut Pollution To Attract Foreign Cash

Hong Kong must take drastic action to slash pollution to keep attracting foreign investors and protect public health, a new study says. The city should follow the examples of Los Angeles and London, which have reaped the benefits from tougher emission targets and innovative anti-pollution measures, the Civic Exchange, a leading think-tank, said in a report.

"Air pollution has become the most serious environmental problem for Hong Kong, affecting not only public health but also the city's ability to attract and retain foreign investment," the study said. "There is an urgent need to devise and implement a comprehensive air quality action plan to improve Hong Kong's air quality."

The report comes as Hong Kong residents endured a weekend of serious pollution, with the government warning people with heart or lung conditions to avoid doing exercise or outdoor activities in some parts of the city.

Lessons for Hong Kong: Air Quality Management in London and Los Angeles called for new stringent air quality standards, a study of Los Angeles' success in reducing emissions at its busy port and a re-examination of road pricing in light of London's introduction of the scheme. It also called for greater cooperation with authorities in southern China, where heavy industry and factories, many owned by Hong Kong-based companies, are often blamed for much of the pollution here.

"Hong Kong aspires to be a financial centre, we need to be as clean as other financial centers," Christine Loh, chief executive of Civic Exchange, told reporters. "Perhaps then the financial services sector will no longer feel worried about moving their people here."

Last year, foreign chambers of commerce, including the powerful British and American chambers, warned that executives from their home countries had expressed concerns about setting up in Hong Kong because of the pollution. Hong Kong's famous Victoria Harbor was obscured by a grimy haze for around a third of last year, with the number of days of reduced visibility up by 172 percent since 1997.

China's rampant economic growth, particularly in the south, has seen a surge in demand for energy, and coal-burning plants that were closed down for environmental reasons have reopened.

103. Respiratory Diseases On The Rise in Vietnam Due To Worsening Air Pollution

What's the tenth deadliest thing in Vietnam? The air is. According to the Health Prevention Department, respiratory diseases are appearing with increasing and alarming regularity throughout the nation and the main reason for such a rise is, notably, air pollution.
Ministry of Health surveys have attempted to spread awareness about the seriousness of lung diseases such as bronchitis, yet respiratory diseases rank in the top of reported occupational health hazards, with over 40% of disease sufferers reporting they have contracted such illnesses through their work.

As most people work in populous, polluted areas and around significant amounts of dust, solving the problem remains difficult.

For example, mine workers must deal with the effects of dirt, machines, and mine dust, just as textile workers suffer from fiber dust.

Moreover, many people who work in these environments also live in or near cities where pollution caused by heavy traffic is thickest.

Accordingly, the frequency of patients requiring hospital care for respiratory treatment continues to climb. "We always lack sick-beds. Now, we must have two or three patients share a bed," comments Doctor Nguyen Xuan Nghiem of the National Hospital for Tuberculosis and Lung Diseases.

Nghiem also observes that a decrease in air quality is the main cause of this problem.

Doctor Nguyen Thi Bich Ngoc, who also works at the National Hospital for Tuberculosis and Lung Diseases also agrees with Nghiem's opinions, and she added even when patients recover from illness, they still return to polluted areas, which causes a return of the symptoms.

In 2006, the National Institute of Labor and Environmental Hygiene showed that air quality was degrading rapidly. During rush-hour, the concentration of dust in the air was four times higher than normal. More troublesome, CO (monoxide carbon) levels were 2.5 times higher, and waste from transport vehicles ranged 12.2 to 2,000 times the permitted levels.

Everyone, from students to workers to small children, is affected by these concentrations. Eye, nose, throat, and skin problems are some other less severe issues that arise from, ongoing contact with heavily polluted air. However, people who live near industrial zones are most at risk, where 6.4% of people suffer from bronchitis (the norm is only 2.8%) and 36.1% suffer other respiratory diseases (the norm is 13.1%).

"In light of this information, official aredevoting research funds to continue to study respiratory diseases and their connection to air pollution in Vietnam.

104. Toxic Road Fumes Causing Children's Health Problems in New Zealand

A daycare centre launched by Prime Minister Helen Clark has been blocked from opening because air quality around it is too poor - putting hundreds of others which are sited in some of
the country’s worst pollution corridors under scrutiny. Three government departments are due to meet to discuss the impact bad air is having on early childhood centers and schools. The meetings come after Auckland’s chief medical officer Dr Denise Barnfather blocked the opening of the Jump & Jive centre in Manukau. The centre, owned by Kidicorp, has space for 150 children but lies dormant six months after Helen Clark officially opened it because it can’t pass air quality health checks.

Barnfather cited latest research showing children suffer lung damage and respiratory problems, including asthma, from being housed within 500 meters of a busy road or motorway. Growing problems with air quality, including the projected rise of the most noxious pollutants, have made it a key issue in licensing the centers.

Barnfather said: “We have been talking to the Ministry of Education about looking at all the early childhood centers that might be at risk in the Auckland area, looking to see if it needs to be retrospective for other early childhood centers.”

Ministry of Health executive manager for communicable disease and environmental health Graeme Gillespie said his ministry would meet with the Ministry for the Environment and Ministry of Education on the issue. Part of the meeting would be to form a response to the problem. "The Ministry of Health is committed to contributing to an appropriate all-of-Government response to this issue. The Ministry of Health will provide advice on the health impacts and extent of the risk to health."

A spokesman said the ministry had been working with the Auckland Regional Council and Auckland Regional Public Health on the issue in the past. "However, in light of this new information, it has been considered appropriate to consider any national policy implications and look at the issue from a national perspective."

Barnfather refused to sign off on mandatory health checks after concerns about the quality of air on Great South Rd, near the Southern Motorway, costing Kidicorp $30,000 a month and putting its $1 million investment at risk. She said there was also discussion about the impact poor air quality would have on children at schools, many of which are also built along main transit routes.

Barnfather sits on the Auckland Regional Council’s land transport committee, which, last week, was presented with a review of international research showing the Queen City’s air quality problems are worse than previously thought.

105. New Zealand Schools’ Pollution Levels Monitored

A group of Christchurch schools will soon have a clearer picture of their pollution levels. Canterbury University researcher Kirsty Holland, a first-year geography masters student, has placed monitoring tubes at 10 Christchurch schools to measure nitrogen dioxide in the air.
International research has linked nitrogen dioxide with an increase in respiratory problems. It can also be harmful to people with asthma and allergies.

Holland said about 80 per cent of nitrogen dioxide in Christchurch came from exhaust fumes. The rest is produced by industry and home heating.

The tubes have been placed on four roads surrounding each school, including arterial routes and roads used by parents to drop off and pick up their children. Tubes have also been placed in school grounds and inside classrooms, to find out how far the nitrogen dioxide produced on the road travels.

"Some teachers have asked me to measure in specific classrooms and I hope to be able to share my data with all the schools involved," Holland said.

"I am also interested in sustainability and transport is a part of that, so I am interested in the aspect of trying to reduce the number of people who drive their children to school."

Holland is measuring nitrogen dioxide levels for two weeks during term and two weeks during the school holidays to see if the level falls in line with a drop in traffic.

She also hopes to repeat the study in the summer, when there should be less pollution caused by people heating their homes.

Holland said her study had become timelier after air pollution hit the headlines recently when an Auckland pre-school was prevented from opening because it did not pass air quality checks.

The teachers' union, the New Zealand Educational Institute (NZEI), said all pre-school centers and schools should be tested for air quality and the Education Ministry should start considering air quality when looking at locations for new schools. "What is needed is mandatory air quality testing at schools which could be at risk," NZEI vice-president Frances Nelson said.

The Health, Education and Environment ministries are due to meet this week to discuss the air quality issue.

106. **Diesel Price Soars In Australia**

THOUSANDS of motorists have been hit with big price rises for diesel, despite growing demand for the efficient fuel. Motorists were paying up to $1.40 a liter for diesel, after an 11.5 cent jump in the wholesale price during the past month. The cheapest diesel in Melbourne was selling for $1.29 a liter -- almost 8c above the average price for unleaded.
The big price gap has been blamed on high demand for diesel in China and India. But angry motorists have been confronting petrol station staff, demanding to know why prices have jumped.

107. Ministry of Environment and Forests Highlights Most Polluted Cities in India

As per the 2005 Environmental Sustainability Index (ESI) the ranking of India is at the 101\textsuperscript{st} position out of 146 countries. The Central Pollution Control Board (CPCB) is executing the National Air Quality Monitoring Program (NAMP). Based on the monitoring of ambient air quality, fifty-one (51) non-attainment cities have been identified in the country in which the prescribed Respirable Particulate Matter (RSPM) levels, specified under the National Ambient Air Quality Standards (NAAQS), are not met. The list of cities and their pollution level is contained in the following table.

The steps taken for control of pollution in the country are:

- (i) A road map up to 2010 has been laid down by the Expert Committee on Auto Fuel Policy for controlling Vehicular pollution from both new as well as in-use vehicles all over the country;
- (ii) Introduction of Euro-II emission norms for the whole country and Euro-III norms for 11 mega cities;
- (iii) Introduction of Euro-II and Euro-III compliant fuel for the whole country and 11 mega cities respectively. This includes reduction in Sulfur and Benzene contents in diesel and petrol;
- (iv) Introduction of cleaner fuels like Compressed Natural Gas (CNG) and Liquefied Petroleum Gas (LPG) in a few polluted cities;
- (v) Introduction of improved Pollution Under Control (PUC) certification system;
- (vii) For restoration of river water quality, national river conservation plan has been prepared and implemented.
- (viii) Notification of general and source specific environmental standards;
- (ix) Preparation of Environmental Management Plan for restoration of environmental quality in critically polluted areas; and
- (x) Regular monitoring for environmental compliance.

The most polluted cities in the country are:

<table>
<thead>
<tr>
<th>Order</th>
<th>City</th>
<th>RSPM Annual average concentration during 2005 (Res. Areas)</th>
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<tbody>
<tr>
<td>1</td>
<td>Gobindgarh</td>
<td>250</td>
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<td>2</td>
<td>Ludhiana</td>
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<td>3</td>
<td>Raipur</td>
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<td>4</td>
<td>Lucknow</td>
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<tr>
<td>5</td>
<td>Kanpur</td>
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<td>6</td>
<td>Jalandhar</td>
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<td>7</td>
<td>Alwar</td>
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<td>8</td>
<td>Jharia</td>
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<td>9</td>
<td>Dehradun</td>
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<td>10</td>
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<td>33</td>
<td>Pune</td>
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<td>34</td>
<td>Visakhapatnam</td>
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<td>40</td>
<td>Mumbai</td>
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<td>Udaipur</td>
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<td>42</td>
<td>Trivendrum</td>
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<td>Korba</td>
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<td>Hyderabad</td>
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<td>45</td>
<td>Rayagada</td>
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<tr>
<td>46</td>
<td>Bangalore</td>
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<td>47</td>
<td>Nagpur</td>
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<td>48</td>
<td>Kozhikode</td>
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Panel Supports Holistic Approach To Mitigate Bangalore’s Traffic Woes

The daily chaos on Bangalore roads and the resultant loss of precious man-hours and fuel, besides increase in the number of road accidents and air pollution could be mitigated to an extent if the directions of a high-powered committee constituted by the Supreme Court are enforced in their true spirit. The Bhure Lal Committee, constituted in 2003 to review air quality improvement in metros, held a review of Air Quality Improvement Action Plan for Bangalore, recently. It issued three directions to the Government – to prepare a comprehensive parking policy (Urban Development Department); a transport plan (Bruhat Bangalore Mahanagara Palike) and a policy for running 10,000 buses besides steps for decongestion of city roads and demand management (Transport Department). The reports will be reviewed and action plan will be chalked out thereafter. The meeting was attended by heads of various civic agencies and secretaries to departments concerned.

The committee, sources said, was particular about encouraging public transport so as not only to decongest the roads, but also to bring down the air pollution levels. As such, every activity should revolve around efficient public transport and there should be a coordinated approach by different stakeholders – BBMP, Bangalore Development Authority, traffic police, UDD, Bangalore Metropolitan Transport Corporation and the State Pollution Control Board, it said.

Vehicle movement

It noted that Bangalore lacked a well-defined parking policy. Parking of private vehicles in public places was taking away the utility of valuable public place, which should have been used for movement of general public. The committee observed that multi-level parking facilities required huge investment. Instead, the movement of private vehicles should be curbed as far as possible and the policy should focus on this issue, it said. Whatever infrastructure was added would become insufficient within no time as it would not match the growing number of private vehicles, it said.

The BBMP should come out with a comprehensive transport policy offering synchronization of various modes of public transport – bus, railway and the metro. The Karnataka Urban Infrastructure Development Corporation was on the verge of completing a survey in this regard and the policy should be based on the survey report, the committee suggested.

There should be an action plan to operate as many as 10,000 buses in the city in a phased manner.
A ban on movement of private vehicles during peak hours could be considered provided the BMTC offered point-to-point bus service at high frequency.

Of the 1,763 km roads in the city, the committee was told, 290 km of roads were of four-lane or more (width beyond 80 feet). These stretches could accommodate dedicated path for BMTC buses during the peak hours to improve the efficiency of operation and discourage use of private vehicles.

The Karnataka State Legal Services Authority, which is determined to reduce air pollution in the city, will coordinate with the mission. Its executive chairman, V. Gopala Gowda, told The Hindu that he would shortly call a meeting of stakeholders to discuss the action plan. “We should concentrate on social gains instead of individual gains, and public transport should be given priority,” he said.

109. Petrol, Diesel Autos To Make Way For LPG Vehicles In Chennai

Autorickshaws in the city will soon become eco-friendly as the Tamil Nadu Government has decided to replace the petrol and diesel-fuelled vehicles with LPG fitted ones. Announcing this at a function after flagging off five ultra luxury air-conditioned buses here, Local Administration Minister M K Stalin said the Government had decided to help autorickshaw drivers to switch over to LPG fuel as they were causing a lot of pollution.

Mr. Stalin, who distributed subsidized permits for LPG fuel autorickshaws, said the Government, in a phased manner, would ensure that all the 33,000 autos plying in the city switched over to LPG fuel. Besides being eco-friendly, LPG would be a viable alternative fuel for the drivers, as it was available at Rs 27 per kg.

Initially, permits would be given to 10,000 autorickshaws, with preference given to women and unemployed youth. In a phased manner, all the 33,000 autorickshaws in the city would be made eco-friendly, he added.

Speaking on the occasion, Transport Minister K N Nehru said the State Government would give a subsidy of Rs 2,000 for conversion of petrol and diesel run autos to LPG. The Government would also arrange for loans for autorickshaw drivers, he added.

110. Environmental Degradation Said Damaging Pakistan’s Economy

Environmental degradation is causing damages to the tune of Rs 365 billion per annum or 6 percent of the country’s annual gross domestic product (GDP) to Pakistan’s economy says a World Bank report released recently.
The highest cost is from inadequate water supply, sanitation and hygiene Rs 112 billion, followed by agricultural soil degradation Rs 70 billion and indoor air pollution Rs 67 billion. Urban air pollution (particulate matter) adds another Rs 65 billion, the report adds.

Pakistan’s environmental problems are a concern, not just because of the intrinsic virtues of promoting responsible environmental stewardship, but also because of the economic consequences of environmental degradation. Using conservative estimates the report finds that the mean annual cost of environmental degradation is approximately 6 percent of GDP.

The costs are of a similar magnitude to the recent growth performance recorded in the national accounts. The implication of this continuing degradation is that despite record GDP growth rates many development indicators still show limited improvement.

These estimates are based on a study commissioned to support preparation of the SCEA, in response to a request from Ministry of Environment. Since water supply, sanitation and hygiene issues dominate the costs it is tempting to argue that policy efforts should focus on this sector. But this would be premature and does not necessarily follow from these findings. To determine the optimum sequence of interventions, expected policy benefits need to be compared with the anticipated costs. The aggregate estimates provided in the said report are the first step in addressing this issue. The next task is to identify and rank the returns from various policy investments. In practice policy priorities are guided by the need to accommodate diverse and often conflicting objectives. The information provided in this report provides a rational and transparent basis for decision-making.

Environmental and natural resource damages amount to Rs 365 billion per annum. About a third of this cost is attributable to the death and illness resulting from waterborne diseases caused by inadequate water supply, sanitation and hygiene. Airborne particulate matter exceeds safe levels in all major cities and causes 22,700 deaths per year. Indoor air pollution causes the deaths of more than 30,000 children per year.

To reduce the costs associated with environmental and natural resource damages in Pakistan, the SCEA provides recommendations targeting institutions, regulations, capacity, and accountability. The report recommends strengthening institutional design, in particular to guide federal oversight of environmental authorities delegated to provinces, to build partnerships between federal, provincial and municipal authorities for clean air, and to define responsibilities for water quality protection.

The regulatory framework should be updated to set health-based air quality standards, use-based water quality standards, and standards for drinking water. Vehicle emission and fuel quality standards should also be updated.

**111. Malaysia’s PM Says Not Raising Gasoline, Diesel Prices This Year**
Malaysia's Prime Minister Abdullah Ahmad Badawi said that the government will not hike the retail price of gasoline and diesel until next year as promised even after crude prices surged to a record. “(Rising oil prices) may have some impact on our proposal for development... (But) we are also mindful of the fact that some time ago we made a statement that we will not increase the price of oil until the end of the year. That we are aware of,” Abdullah told reporters at a press conference.

Asked if domestic fuel prices will be raised early next year, he said the government would make that decision at the time. “Next year we will think about it. We are not completely ignoring this. We are monitoring it all the time,” he said.

Malaysia is a net exporter of petroleum. Domestic retail prices of gasoline and diesel are heavily subsidized by the government. Currently, Malaysians pay 1.92 ringgit per liter for petrol. (1 US dollar = 3.48 ringgit)

112. Malaysia Says Demand For Bio-Diesel Has Soared

The worldwide demand for palm oil for making bio-fuel such as bio-diesel has soared worldwide because of the current high price of fossil fuels and the increasing global warming due to overuse of fossil fuels. Malaysia expects to mark a record year in terms of export of this “golden oil” judging from this current trend of global demand, said Plantation Industries and Commodities Minister Datuk Peter Chin Fah Kui. “Because of the current sharp hike in demand for palm oil, the price per ton has also shot up. Due to this, our revenue from exporting this oil has also shot up tremendously this year.

“For the first six months of this year, Malaysia’s revenue from export of palm oil and related products was RM17.9bil, an increase of 23.6% from the RM14.1bil earned during the first six months of last year. “If this trend continues, this year will be a record year in terms of palm oil earnings,” he said at his office.

Chin, who is Miri MP, said that because of this high price, Malaysia’s palm oil industry was enjoying its most robust revenue growth even though its actual volume exported had declined from 9.3 million tons for the first half of 2006 to 8.9 million tons for the first half of this year.

113. Hyundai to Start Fuel Cell Car Output from 2012

Hyundai Motor Co South Korea’s top auto maker, plans to begin mass production of its fuel cell car model from 2012 at the earliest, a company official told Reuters recently. Global car makers such as Toyota Motors Corp and General Motors Corp are developing environmentally friendly vehicles, under pressure to reduce harmful emissions produced by their cars amid fears of global warming. “We will start mass production of a fuel cell model, like the i-blue, from 2012 at the earliest, or from 2015 at the latest,” a Hyundai official said, asking not to be identified. He declined to provide price details, sales targets or development costs.
Hyundai unveiled "i-blue", the fuel cell CUV (crossover utility vehicle), at the Frankfurt International Motor Show earlier this month.

Hyundai, the world's No.6 car maker by sales volume along with its affiliate Kia Motors Corp plans to start in 2010 mass production of a hybrid model -- the Elantra compact car, according to the official.

Proponents insist that 5 million to 10 million fuel cell cars could be on the road within 15 years, with the number growing to 350 million worldwide by 2050. But while the technology is making great strides, it still costs far too much and lacks the widespread infrastructure that motorists will need to fill their tanks with hydrogen.

114. Electrifying Public Transport Seen Helping Cut Deadly Pollution In Manila

In the Philippines, the smoke-belching "jeepney" that has been the backbone of commuter transport for half a century is also said to be one of the biggest contributors to air pollution. In Manila, a city of 12 million people, commuters spend hours packed like sardines inside jeepneys breathing in the toxic air.

Some 2,000 people die each year in the Philippines, most of them in Manila, due to the effects of air pollution and more than 9,000 suffer from chronic bronchitis, a 2002 World Bank study found. The cost to the economy in days lost through sickness ranges from 170 million to 430 million dollars, according to World Bank and Asian Development Bank (ADB) estimates.

A local company backed by the environmental group Greenpeace thinks it may have a solution to help ease the air pollution problem -- electric jeepneys powered by a "bio-digester plant" that generates electricity from household waste. Solar Electric Co. Inc. sees the electric jeepney as a way of reducing both pollution levels and household garbage at the same time.

Despite the environmentally friendly approach to the transport problem the electric jeepney still has to prove itself and win over the powerful jeepney drivers. The e-jeepneys, as they are known, need to be capable of running on the mean streets of the Philippines where overloaded vehicles, potholes, reckless driving and even the occasional flood are all part of any normal day for the standard jeepney.

The jeepney first emerged just after World War II when a battle-ravaged Philippines was short of motorized transport. Clever entrepreneurs bought up US military surplus jeeps, extended their chasses to allow them to carry more people, put roofs on them and turned them into low-cost commuter mini-buses, serving routes that bus or rail companies ignored.
Orlando Marquez, president of the Jeepney Association of the Philippines, an umbrella group of jeepney operators, says there are about half a million registered jeepneys plying the roads today and about an equal number of illegal jeepneys which operate without government permits.

An ADB report released in December 2006 said: "The transport sector is the most significant source of pollution in Metropolitan Manila."

Robert Puckett, president of Solar Electric, says electric jeepneys could help cut pollution levels. Made in China the e-jeepney costs some 550,000 pesos (11,956 dollars) and can cover 100 kilometers (62 miles) before needing to be recharged, which takes between eight and 10 hours. With a maximum speed of about 40 kilometers (24.8 miles) an hour they can carry 14 passengers -- about the same number as a regular jeepney -- and cost about 150 pesos a day in electricity, says Puckett, compared to around 700 pesos per day for diesel.

In recent weeks, three e-jeepneys have been used as shuttles at a Manila university and in the central city of Bacolod but they cannot roam the streets freely until transport officials give their approval. Greenpeace International energy campaigner Athena Ronquillo says the transport agencies have indicated they may give their approval before the end of September. When that happens, five e-jeepneys will get a test run in Manila's Makati business district and in Bacolod for two to three months.

If the e-jeepneys prove viable, the Makati City council will lease 40 and establish the biodigester plant that will generate power for them, says Joey Salgado, spokesman for Makati city.

While no one believes the e-jeepneys will change pollution levels overnight, Ronquillo said they "will show there are climate-friendly alternatives to the current polluting modes of public transportation in the Philippines".

115. Air Pollution Kills Nearly 5,000 Metro Residents Yearly

While the phase-out of leaded gasoline has improved air quality in the Philippines, more than 18 million people still live in cities with unhealthy levels of airborne particulate matter. Of the urban cities, Metro Manila has the largest "health burden" from air pollution. Estimates showed there were nearly 4,968 premature deaths each year in Manila due to respiratory and cardiovascular diseases from exposure to poor air quality, according to the Philippine Environment Monitor, a joint report of the World Bank and the Department of Environment and Natural Resources (DENR) released recently. These accounted for 12 percent of all deaths in the metropolis, the highest in any urban area in the country, it said.

Rahul Raturi, sector manager of the WB's Rural Development, Natural Resources and Environmental Sector, said that one-fifth of reported cases of disease were due to air pollution, water pollution, poor sanitation and hygiene. "The cost of treatment and lost income from these
Raturi said the poor were more exposed to environmental risks. Low-income groups had lower access to basic sanitation and safe water supply. They were also exposed to water and air pollution.

According to the report, several government interventions over the past 10 years had improved air quality. For instance, the closure of a number of coal-fired power plants near Manila in 2001 led to a reduction in sulfur dioxide concentrations, while the phase-out of leaded gasoline led to a ten-fold reduction in ambient lead levels since 2001, it said.

But air pollution remained higher in urban centers than in rural areas, the Environment Monitor said. Concentrations of particulate matter, often used as an indicator of air pollution, were estimated to be three times higher on average in “urban roadsides” than in rural areas, it said.

Many cities in the country had air pollution levels above national standards, it added.

``With regard to the health impacts of air pollution, one very clear message stands out: Particulate matter emitted from motor vehicles is the largest health risk from air pollution,” Raturi said. “Some 18 million people live in cities that exceed DENR standards. Metro Manila with its large population and high pollution levels has the largest health burden from air pollution, with motor vehicles and utility vehicles being the greatest culprits,” he added.

Particulate emissions in Manila largely came from motor vehicles (84 percent), solid waste burning (10 percent), and industries (5.5 percent).

Seventy percent of car emissions came from more than 200,000 diesel-powered utility vehicles, like jeepsneys, and 170,000 gasoline-powered motorcycles and tricycles. “Prioritizing measures to further reduce these emissions under the Clean Air Act would result in important health improvements,” Raturi said.

In terms of premature deaths due to pollution, Metro Manila was followed by Metro Cebu's 608, Davao City's 414, Zamboanga City's 240, Iloilo City's 204, Cabanatuan's 134, according to the report.

116. Formosa Cuts Sulfur Content in Diesel, Boosting Sales To Europe

Formosa Petrochemicals Corp. may start to export a cleaner-burning diesel in January, targeting increased sales to Europe where stricter pollution control laws are being enforced, two company officials said. The refiner, Taiwan's second-biggest fuel supplier, may sell as much as 1.2 million barrels a month of diesel with 10 parts per million of sulfur next year, the officials
said, asking not be identified because of a company policy. Formosa now exports 960,000
barrels a month of diesel with 50 parts per million of sulfur, in individual spot cargoes.

Adding ultra-low-sulfur gas oil to Formosa's product range will help to boost sales as all
European Union members have agreed to make the grade mandatory by 2009. Output is falling
short of demand in the region because of inadequate investment by refiners in technology to
strip out pollutants.

"There will be growing opportunities for Asian gas oil to move to Europe," said Harry
Tchilinguirian, a senior oil market analyst at BNP Paribas in London. "Investment in
desulphurization capacity in European refineries has lagged behind demand."

Australia will switch to ultra low-sulfur diesel with 10 parts per million sulfur starting in January
2009, from 50 parts per million now. Indonesia, Vietnam, India and Sri Lanka have also reduced
sulfur limits in diesel fuel emissions this year.

117. Pollution Looming Large Over Kochi, India

Kochi is set to join the league of metropolitan cities in the country, including on matters like air
and sound pollution. Air pollution is no longer confined to the Eloor-Edayar industrial belt. The
phenomenal increase in the number of vehicles, especially cars, bikes, and goods carriers, has
brought its share of pollution woes. The worst affected are two-wheeler riders and pedestrians,
caught in the bumper-to-bumper traffic.

A good number of children and many adults in the city have allergic or other respiratory
ailments. This is apart from partial deafness created by high-decibel horns and ill-maintained
vehicles.

Benny Joseph, State convener of Janapaksham, says that most goods carriers, buses, and
auto-rickshaws in the State use fuel adulterated with kerosene, which is highly polluting and
cancerous. "We took the initiative in exposing the rampant use of fuel mixed with white
kerosene in Palakkad, Thrissur and Adimaly. Blue (ration) kerosene too is being diverted for use
as adulterant in fuel. Sadly, law enforcement agencies are not taking action." He pointed out
that dusty roads and use of air-horns is another cause for concern.

Experts say that old and ill-maintained vehicles are the worst offenders when it comes to air and
sound pollution. "The Bharat II (similar to Euro II) norms has fixed the emission level of carbon
monoxide for cars registered after October 2004 at 0.5 mg and that of two and three-wheelers at
3.5 mg," says M.N. Prabhakaran, Deputy Transport Commissioner.

Sadly, most pollution-testing centers in Kochi have machinery capable of measuring pollution
levels of only 2.5 mg and above. This has prompted the Government to issue an order saying
that their license (issued every five years) will not be renewed if they do not install equipments which are sensitive enough to detect 0.5 mg of pollutants in the vehicle exhaust.

Mr. Prabhakaran said that the testing centers have equipment to test the presence of only carbon monoxide and carbon dioxide. “They ought to have four-gas analyzers – those that can detect the presence of hydrocarbons and oxygen as well. The centers testing diesel vehicles need machinery that can gauge the engine-oil temperature, oil pressure etc., too.”

“It has come to our notice that many testing centers issue pollution-under-control (PUC) certificates without even testing the emission level from vehicles. Most vehicle owners are content if they get a PUC certificate, without bothering about the noxious fumes that their vehicles emit,” he said.

The Motor Vehicles Department recently took up the issue of fake PUC certificates with those who run the centers in Kochi, since high levels of toxic automobile fumes has reduced the level of oxygen in the air.

While un-burnt fuel releases black emissions, oil-burnt fuel gives out white emissions, both of which are not good. The emission must be as transparent as possible and this can be done by proper tuning of the engine, which will ensure the correct air-fuel ratio.

**MIDDLE EAST**

118. **Iran To Distribute 'Diesel Smart Cards'**

Iran's National Oil Refining and Distribution Company (NIORDC) says 'diesel smart cards' will be distributed in the next few months. "Diesel smart cards will be designed and distributed in the next three to four months," the executive director of the company, Mohammad-Reza Ne'matzadeh told Fars News Agency.

Iran started a gasoline rationing scheme a few months ago by distributing smart cards for every vehicle in the country. Drivers throughout the country can only refuel their vehicles by entering the cards into digital devices that have been installed in gas stations.

However, diesel will not be rationed in the country and the smart card will only be used for monitoring, organizing and controlling consumption, said Ne'matzadeh.

One of the reasons Iran has implemented its gasoline rationing program is to counter fuel smuggling to its neighboring countries. Before petrol smart cards were distributed, thousands of gallons of low-priced heavily-subsidized gasoline were illegally shipped to other states and sold for great profits.
Beit Shemesh and Gush Etzion have the highest frequency of ozone pollution, a study obtained by The Jerusalem Post shows. Throughout 2006, the Environment Protection Ministry ran checks in nine cities. Gush Etzion and Beit Shemesh had 260 and 179 days, respectively, in which the pollutant exceeded the WHO's limit.

Elevated ozone levels were found most frequently in relatively rural areas, while they remained low in larger cities; Jerusalem saw only 45 days of elevated ozone levels last year. "The rural places are often the worst because the wind carries the pollutants to high mountains or places with high [levels of] solar radiation," Avi Moshel, deputy head of the ministry's Air Quality division, told the Post.

Natural ozone particles are a principle component of the ozone layer, which acts as the Earth's natural sunscreen. When they are found closer to the ground and enter the air we breathe in levels exceeding the World Health Organization's recommendations, however, they are toxic and can cause respiratory failure, stroke and a 3-5% hike in mortality rates.

At ground level, ozone particles are pollutants created when industrial and automotive fumes interact with sunlight and air.

The Israel Union for Environmental Defense (Adam Teva V'din) also said pollutants created in cities and their adjoining industrial zones took time to become ozone, and that during this process they could drift far from their point of origin.

The nation's air quality is actually worse than these recent findings show, as the data do not include the heavily industrialized Haifa area, Tzipi Iser Itzik, the Union for Environmental Defense's executive director, told the Post. "We think that the current standards do not protect our health sufficiently," Itzik said, adding that her organization was working with the Environment Protection Ministry to pass a clean air law. "It actually pays to pollute in Israel right now," she said.

The ministry's Moshel said his department was working to remedy the problem, which he described as "very severe." He said Haifa was covered by a separate monitoring system that was not included by this most recent air quality survey.

"We are always striving to prevent emissions from factories... We are reducing the pollutant levels emitted by vehicles by strengthening the rules for new vehicles and by strengthening their emissions testing policies," said Moshel, adding that 2006 had been a year of rigorous automotive emissions testing.

Moshel also said his department hoped to implement technological improvements at gas stations to prevent fumes from Escaping into the atmosphere when vehicles' tanks are filled.
120. Israeli Ministers Approve Plan To Reduce Pollution By Vehicles

The Ministerial Committee on the Environment and Hazardous Materials has unanimously approved a plan to reduce vehicle pollution. The plan is considered a national priority project, and was presented by Minister of National Infrastructures Benjamin Ben-Eliezer and Minister for Environmental Protection Gideon Ezra. According to the two ministers, the new plan will put Israel at the forefront of nations acting to improve environmental quality.

The most dangerous form of pollution in Israel's big cities comes from vehicles, which severely threatens public health. Ezra said that over 100 people die a year in the Dan region from air pollution.

In addition to the local health problems, the pollutants include greenhouse gases that exacerbate global warming.

The plan is intended to significantly decrease dangerous levels of air pollution as well as decreasing fuel consumption and reducing traffic. The plan includes new, severe standards for automobile exhaust gases. It includes rules limiting pollutants from diesel vehicles as well as carbon dioxide emission levels for gasoline-powered cars.

The green police will be allowed to remove from the roads vehicles that exceed the limits. In addition, all government and public transport will gradually switch to fuel-saving and environmentally friendly vehicles.

Starting in January 2008 the Transportation Ministry and the Tel Aviv municipality will limit entry to the city's center of diesel vehicles more than five-years old, unless they have emission controls installed.

Also included in the plan is the disposal of old cars in return for payments to their owners. Roadside emission tests will also be reinstated. Employees will be encouraged to travel to work on public transport. Vehicle taxes will take into account an environmental rating.

A study will be made on the use of electric cars to be recharged from the national electric grid within a year. Also, financial incentives for alternative fuels made from non-petroleum sources will be set within 90 days, as well as replacements for diesel fuel.

121. Bahrain Premier To Open Diesel Project

The Prime Minister will open the low sulfur diesel production project on December 11, Oil and Gas Affairs Minister Dr Abdulhussein Mirza announced. The Premier will inaugurate the landmark facility as part of a ceremony marking 75 years since oil was first discovered in Bahrain.
Work on the $718 million (BD270.8m) energy project started in 2003. The NOGA made the announcement in a special updated report on key strategic energy projects.

The plant includes a hydrogen unit with a daily output of 100m square feet. The depletion unit is expected to have a daily output of 40,000 barrels. As for the sulfur production unit, it will top a 340-tonne daily. The 2HDU unit will also be upgraded to boost its production of 10PPM Diesel.

Four other key strategic projects are under study in a package costing an overall $670m (BD253m). These include a $180m (BD67.8mn) lubricant oil production plant. The project is a joint venture between Bapco (a 55pc stake) and Nest Oil company.

The NOGA report also announced a project for crude oil pipeline linking Saudi Arabia and Bapco, costing BD113.1m.

AFRICA

122. Gambia: Proceeding With Leaded Gasoline Phase Out

Momodou O Njie, Deputy Permanent Secretary at the Department of State for Forestry and the Environment has said that the government of The Gambia with technical support from the National Environment Agency (NEA), and through close collaboration with the United Nations Environment Program (UNEP), has studied the impact of certain elements on both the physical environment as well as on humans, specially air pollution due to the release of lead from petrol-driven engines. DPS Njie made these remarks at a massive sensitization and phase out process of leaded gasoline in the country at the traffic lights along the Kairaba Avenue.

According to Mr. Njie, air pollution in many cities in the developing world including The Gambia, is reaching alarming proportions. "Lead, a toxic air-pollutant is extremely harmful to humans, especially children and about eighty percent (80%) of lead pollution in developing countries is attributed to leaded Gasoline (petrol). As a responsible government therefore, we need to safeguard the health of the population and the commitments we have made in international fora. These include the Earth Summit in 1992, where governments committed themselves to reducing air-pollution from cars and trucks", he said.

He added that, in 2001, Sub-Saharan African countries signed the Dakar declaration in Dakar, Senegal resolving to phase-out leaded gasoline by December 2005.

This global-partnership he said was aimed at helping developing countries to reduce vehicular air-pollution through the promotion of cleaner fuels and vehicles specially by eliminating lead and sulfur in fuels.
“Currently 90% of the fuel produced worldwide is unleaded. During the past ten years, an increased number of countries have phased out leaded gasoline in a bid to bring-down the airborne levels of lead from the transport sector to zero,” he said.

Bulli Dibba, Director of Administration and Finance at NEA said his office was created to ensure that people live in a safe and clean environment. He said “when we talk about the environment, we are not talking about things you see. Each and every Gambian should ask him or herself what he can do to make The Gambia a safe and clean place for living.” He added that leaded petrol is not necessary as cars can operate unleaded.

123. Uganda: Diesel Production to Begin in 2009

The production of diesel and kerosene (paraffin) will start in 2009, the energy minister, Daudi Migereko, has announced. Petrol would be produced afterwards, he added. Migereko said this would bring down the fuel prices, which he blamed on the high international purchase price, importation and transportation charges.

The Commissioner for Petroleum, Rueben Kashambuzi, said the diesel would be for vehicles and the heavy fuel would be for electricity generation.

The minister told journalists in Kampala that the Government would produce between 50 and 100 megawatts of electricity from the oil by 2009. A 33KV power transmission line will be constructed from Kaisotonya in Hoima to Fort-Portal, then to Nkenda in Kasese, before being extended to Kampala, Migereko said. Another line would be constructed to serve Hoima and Masindi, the minister told the press.

Pipelines to transport refined fuel from Kaisotonya would also be built and construction works would start “between now and 2009,” he said.

Migereko said the electricity tariffs would drop with the production of power from Kaisotonya and Bujagali dam, which is currently under construction. Plans to construct Karuma power station are also in high gear, he added.

According to him, the ministry was working on the new petroleum production and refining law to replace the Petroleum Act of 1985.

124. South Africa Petrol Prices To Fall 1.4 Pct, Diesel Up

South African petrol pump prices will fall by 10 cents a liter, about 1.4 percent, across all grades from September 5, the government said on Friday. A statement from the minerals and energy department said the most-used 95 grade would drop to 6.91 rand a liter in the central Gauteng province, which includes the financial hub Johannesburg. However, diesel wholesale prices will increase by five cents a liter, it said.
The petrol price fall may ease price pressures in South Africa, where the central bank has singled out high food and fuel costs as key inflation drivers. Fuel costs make up about 4.7 percent of the main CPIX index targeted by the central bank for monetary policy, although its indirect impact on inflation is much wider.

125. Rwanda To Initiate Biodiesel Production

Brazafric, a leading agro-machinery manufacturing company in East Africa has announced plans to start commercial biodiesel production in the country. The move comes after researchers discovered that Rwanda has millions of jetropha trees, which are rich in oil that can be processed to produce diesel.

Readon Sakwa, the country manager of Brazafric Enterprise Rwanda Limited, said Ministry of Agriculture and MIG have started a campaign to make farming of this oil rich tree popular.

South America

126. Brazil's Petrobras Starts Work On New Refinery

The initiation work ceremony, of the new 200,000 bd, Abreu de Lima refinery in Pernanbuco state, was held recently with the attendance of president of the Republic, Luiz Inácio Lula da Silva, Pernambuco state governor, Eduardo Campos, Ipojuca mayor, Pedro Serafim de Souza Filho, in addition to Petrobras' president, José Sergio Gabrielli de Azevedo, and Downstream director Paulo Roberto Costa, among other company representatives.

Venezuela's oil company PDVSA, was originally supposed to be Petrobras partner and have a 40 percent stake in the US$4.05 billion (€2.97 billion) refinery, with Brazil's Petrobras holding the remaining 60 percent. But PDVSA is still without a decision, so Petrobras began to construct the refinery without its Venezuelan partner.

Petrobras Chief Executive Sergio Gabrielli told the Agencia Estado news agency that they couldn't afford to hold back the project further for negotiations with PDVSA. Gabrielli said Petrobras will build the refinery with or without PDVSA.

The project is particularly important: it marks the resumption of the downstream industry's expansion in Brazil, after a 27-year period without any new refineries being built in the country.

The new unit will use heavy oil lifted in Brazil and Venezuela, countries that have large reserves of this type of oil. Capable of processing 200,000 barrels of oil per day, the refinery is expected to produce some 814,000 m³ of petrochemical naphtha, 322,000 tons of LPG (cooking gas), 8.8 million tons of diesel fuel, and 1.4 million tons of oil coke per year.
The new refinery's main production focus is on diesel fuel, particularly aimed at supplying the increased demand for derivatives in the Northeast, currently fuel-deficient. The new unit's location was selected based on studies that indicated the Suape area, where the geographical conditions and port infrastructure attend to the business' needs.

The Abreu e Lima refinery project also takes the history of the Brazilian industry a step ahead from the technological standpoint. The unit will be the first to process 100% heavy oil, which accounts for nearly 80% of all of the oil produced in Brazil. The other refining units depend on a mix of light oil to the heavy oil in derivative production.

To the project's general manager, Ricardo Barreto, this advantage will translate in economic benefits, since the unit will process a less expensive type of oil (heavy oil costs about $15 less than Brent oil, light oil standard priced in Great Britain), and will sell diesel fuel, the most profitable derivative in Brazil.

Another Abreu e Lima Refinery differential is that the unit will be capable of producing low-sulfur content derivatives and will even be able to comply with the strict European standards, which specify maximum emission limits of 10 ppm of sulfur. The legislation currently in effect in Brazil allows sulfur contents of up to 500 ppm in metropolitan regions, but will be changed, in 2009, to 50 ppm, for metropolitan diesel. The refinery will kick its operations off producing diesel fuel with 50 ppm of sulfur.

127. Santiago Air Quality Worst in Seven Years

Air quality in Santiago is at its worst level for seven years, according to a preliminary report published by Chile’s National Environment Center (CENMA). Between April and August this year, 28 days were categorized as critical episodes--when the air quality index exceeds 200 points--the highest number since 2000. Located in a steep basin with little wind, Santiago is naturally susceptible to atmospheric pollution. Air quality had improved markedly over the last decade, however, with improvements in fuel quality, the spread of catalytic converters, and the arrival of cleaner-burning natural gas, according to Manuel Merino, head of CENMA's air quality laboratory. Such improvements have tailed recently due to the city's continued population growth. The situation also was aggravated this year by an especially cold winter, which led to a greater use of wood-burning stoves, limited gas supplies, and problems implementing a new public transport system, and also caused industry to revert to dirtier fuels. Paola Vasconi of environmental group Fundación Terram said the city should prevent further expansion beyond current city limits and should encourage industry to relocate in less polluted areas of the country.

128. Ex-Petrobras Gas & Energy Chief Calls Brazil's Biodiesel Program a ‘Disaster’
According to a report from Folha de Sao Paolo, just-retired Petrobras exec Ildo Sauer terms the Brazilian government scheme to mandate biodiesel blending a “disaster,” which explains why Petrobras is delaying the rollout of “H-Bio” production at its refineries. Overpriced soybean oil makes “H-Bio” production a money-loser. But Brazil’s minister of Agrarian Development, Guillermo Cassel, hit back at the criticism from Ildo Sauer. “The criticism is frivolous and not based on the facts and the reality,” the newspaper quoting Cassel as saying. Earlier, the former Petrobras director of gas and energy said in an interview with O Globo that the biodiesel blending mandate program has been “a disaster. Everybody knows that [biodiesel] is facing difficulties,” he said. The interview came two days after his resignation from Petrobras. But while the Agrarian Development minister is upset over the attack, support for the former Petrobras exec came from the director of the CBIE (Brazilian Infrastructure Center), Adriano Saucers. The criticism of biodiesel is “coherent” because the government is mixing-up social policy with energy policy, he said. Brazil’s government nevertheless insists that “it will be able to anticipate the goal of mixture of 5% of biodiesel to diesel by 2010, and not by 2013, as foreseen originally,” the Folha de Sao Paolo report said. “One of the possibilities to try to speed up the mixture goal is to make a gradual increment of 1% [blending]” in each of the next few years, the report said.

129. Argentina Reopens Brazilian Oil Plant After Firm Agrees to $70 Million Cleanup

On October 5th, Argentina ended a partial shutdown of Brazil's oil company Petrobras at a facility in the Buenos Aires outskirts, after the firm pledged to launch a $70 million-plus plan to improve hydrocarbon storage and handling, reduce emissions, fix leaks, and take other remedial steps. The Environment and Sustainable Development Secretariat said it decided to end the shutdown after the company agreed to the remediation plan. Argentina imposed the partial shutdown on Sept. 24th because of environmental concerns.

The remediation plan envisions: a reduction in gas emissions, solid waste, and liquid effluents; the acquisition of two double-hull tankers to replace older, unsafe ships; construction of new, state-of-the art docks on the Rio de la Plata to alleviate navigation on its tributary, the Matanza-Riachuelo, where current Petrobras docks are located; and the replacement of top-loading trucks with bottom-loading vehicles to reduce gas emissions.

In September authorities shut down a nearby Royal Dutch Shell refinery for a week, also citing environmental concerns. The shutdowns are part of a $1.8 billion drive to clean up the Matanza-Riachuelo, Argentina’s most polluted river.

GENERAL

130. OECD Roundtable Report Questions Biofuels Role in Meeting, Climate Challenges
Biofuels are not expected to make a major contribution to solving the world's future energy supply and climate change concerns and may actually do more harm than good, according to an analysis presented during a Sept. 11-12 meeting at the Organization for Economic Cooperation and Development. The report, Biofuels: Is the Cure Worse Than the Disease?, highlights serious concerns about the potential economic and environmental consequences of radically boosting production of farm-sourced fuels, as well as the risks to future food supply.

It also calls into question the conventional wisdom behind biofuels policy in many of the OECD's 30 member countries, suggesting governments stop issuing mandates for production, roll back preferential tax treatment, and reconsider their use of farm subsidies and tariffs to favor domestic production over imports.

The report was discussed during a high-level meeting of OECD's Roundtable on Sustainable Development, an independent forum that advises OECD Secretary-General Angel Gurria on environmental sustainability issues. Brice Lalonde, a former French environment minister who chairs the roundtable, said that the report is expected to influence ongoing analytical work on biofuels at the Paris-based OECD.

The OECD and its sister organization, the International Energy Agency (IEA), were given a mandate last May by member countries to carry out a wide-ranging study on the production and use of biofuels. The joint OECD-IEA analysis, slated for completion in mid-2008, will assess the likely impacts of increasing biofuels production and will offer governments advice on the best policy approaches.

The study will look at the likely positive benefits of increased biofuels use, notably lower greenhouse gas emissions and higher farm incomes, as well as the potential pitfalls, including impacts on food prices, poverty reduction in developing countries, trade flows, and the environment. It will be presented at the next summit of leaders from the Group of Eight (G-8) countries (Canada, France, Germany, Italy, Japan, Russia, the United Kingdom, and the United States).

While Lalonde insisted that the roundtable's analysis was "independent" from ongoing work being undertaken by the OECD, he was optimistic that its work "would have some influence" on recommendations presented to governments and the G-8 next year.

The roundtable's analysis and subsequent discussions "make it clear that biofuels will never offer a major solution for replacing petroleum products," Lalonde said. Biofuels "are not a cure-all, and it is important that this was said in the discussions," Lalonde said.

Ken Ash, deputy director of the OECD's food, agriculture, and fisheries directorate, said the participants in the OECD-IEA biofuels study "will take a look at what the roundtable had to say." However, he suggested it would simply be "one of many inputs" taken into account. The OECD and IEA "want to take a bit more time, to look at all relevant aspects," Ash said. "Our interest is
in coming back with as comprehensive an assessment of the situation on biofuels—production, use, and policies—as we can," Ash said.

The report to OECD ministers and G-8 leaders will address how biofuels may influence future energy supplies, various economic and trade themes (notably as concerns energy markets and the food chain), and the environmental sustainability issues linked to greater use of cropland for energy production, Ash said. Each of these issues is in fact addressed in the roundtable report, which is strongly pessimistic that biofuels can offer a real alternative to fossil fuels or help countries limit greenhouse gas emissions. For example, the report states:

- "The potential of the current technologies of choice—ethanol and biodiesel—to deliver a major contribution to the energy demands of the transport sector without compromising food prices and the environment is very limited".

- The report doubts whether nascent "second-generation" technologies—based on conversion of biomass to liquid—"will become economically viable over the next decade, if ever."

- "Even with positive technological developments, there are serious doubts about the feasibility of using residue material as biomass feedstock on a large scale".

The report is critical of OECD countries that mandate the use of biofuels, establish minimum blending percentages, or offer fuel-tax preferences to stimulate production. "In most cases, these policy measures do not distinguish among biofuels according to their feedstocks or production methods, despite wide differences in environmental costs and benefits," according to the report. "This implies that governments end up supporting a fuel that is more expensive and has a higher negative environmental impact than its corresponding petroleum product."

Two industry groups have urged the OECD to disown the report. European bioethanol fuel association EBio and the Renewable fuels association called the report unauthorized, biased and inaccurate. Meanwhile, green group Friends of the Earth Europe called on the public to e-mail MEPs calling for the EU's target of 10 per cent biofuels by 2020 to be abandoned.

131. Diesel Fumes Increase Risk of Heart Attack, Stroke, Death

A recent study in people helps to prove the correlation between heart problems and poor air quality, hinting at blood clotting as the cause, according to Nature. Recent research in mice exposed to smog suggests that the immune system starts the process.

The human study's lead author, cardiologist David Newby of the University of Edinburgh, told Nature that people should reconsider exercising outside during bad air days, particularly if they are at risk for heart problems. Newby's work appears in the New England Journal of Medicine.
In the year 2000, around 800,000 people around the world died from air pollution, many through heart attacks and stroke, according to the World Health Organization.

In the animal research, published in the Journal of Clinical Investigation, fume-inhaling mice showed higher levels of several proteins linked to blood clotting. The evidence suggested that an immune response to particles in the lungs caused the inflammation that led to clots. Clots in turn can lead to heart attacks and strokes.

These latest studies add more evidence to what should be painfully obvious: air pollution is an extremely serious problem in much of the world, and is a silent killer of thousands. Asthma rates are exploding across much of the world, particularly in developed countries, and the problem is now the biggest reason for loss of school time. Bad air quality results in millions of dollars in lost productivity, suffering and decreased quality of life.

It’s clear that measures to clean the air should be a high priority for regulators and watchdogs. Historically, diesel engines were prized for their efficiency, but it’s now clear that the old-style technology releases far too much particulate matter. New efforts to clean diesel school buses, as well as other vehicles, aren’t happening too soon. It’s also time to ramp up conversion to biodiesel, which burns much cleaner than the old stuff made from petroleum.

The researchers tested 20 male volunteers, all of them heart attack survivors, who pedaled an exercise bike while breathing diluted fumes from the exhaust of an idling Volvo diesel engine. The exposure was comparable to the pollution levels found while driving in traffic.

The new study looked at one particularly suspect element of air pollution and how it affected people over the short term. Nicholas Mills of Britain's Edinburgh University and his colleagues found that when the volunteers breathed diesel fumes, their hearts were far more likely to be starved of oxygen than when they were breathing clean air. And when they tested the blood of the men, they found that the fumes inhibited the body's natural system of breaking down the clots that can spark a heart attack or stroke.

That may explain the results of population-based studies showing that air pollution increases heart problems, they said.

It is not known exactly why the hearts became starved of oxygen or which substance in the exhaust was responsible for the effects. "The study was specific in evaluating the effects of dilute diesel exhaust, an extremely complex mixture of particles and gases; it is not possible to glean which constituents of diesel exhaust were responsible for the observed effects," Dr. Murray Mittleman, of Boston's Beth Israel Deaconess Medical Center, wrote in a commentary.

Although the study was only done on men with a previous heart attack, "these findings may represent the tip of an iceberg" and apply to anyone at risk for a heart attack, he said.
Exercise is already known to be beneficial and it especially decreases the risk that a person will have a heart attack while exerting themselves, Mittleman said. "The risk-benefit ratio may be optimized if people exercise away from traffic when possible."

In the mouse study researchers determined the mechanisms by which particulate matter might accelerate thrombosis. They found that mice treated with a dose of well characterized particulate matter of less than 10 µM in diameter exhibited a shortened bleeding time, decreased prothrombin and partial thromboplastin times (decreased plasma clotting times), increased levels of fibrinogen, and increased activity of factor II, VIII, and X. This prothrombotic tendency was associated with increased generation of intravascular thrombin, an acceleration of arterial thrombosis, and an increase in bronchoalveolar fluid concentration of the prothrombotic cytokine IL-6. Knockout mice lacking IL-6 were protected against particulate matter–induced intravascular thrombin formation and the acceleration of arterial thrombosis. Depletion of macrophages by the intratracheal administration of liposomal clodronate attenuated particulate matter–induced IL-6 production and the resultant prothrombotic tendency. Our findings suggest that exposure to particulate matter triggers IL-6 production by alveolar macrophages, resulting in reduced clotting times, intravascular thrombin formation, and accelerated arterial thrombosis. These results provide a potential mechanism linking ambient particulate matter exposure and thrombotic events.

132. Diesel Exhaust Found More Dangerous Than Biodiesel

Researchers at Deakin University have found that diesel exhaust is far more damaging to our health than exhaust from biodiesel, the plant-based fuel. Associate Professor Leigh Ackland, Associate Head of Deakin's School of Life and Environmental Sciences, led a team of researchers who compared the effects of diesel exhaust and biodiesel exhaust on human airway cells. They found that diesel exhaust damaged and killed the cells, while biodiesel exhaust had little effect.

"Australia's escalating need for fuel is posing a major health problem," Associate Professor Ackland said. "The fumes from burning fuels, including diesel, contributes to pollution and can cause heart disease, bronchitis and asthma. Efforts are underway to replace petrol and diesel with cleaner biofuels, such as biodiesel, but there is considerable resistance to this. "This study provides clear evidence that diesel exhaust is more harmful to our health than biodiesel exhaust."

As it is not possible to study in real time what happens in the real human airway, the researchers conducted their research on human airway cells grown in a culture. The cells were exposed to the particulate matter emitted in diesel and biodiesel exhaust fumes.

"Particulate matter is the burnt material, including carbon particles, emitted into the air. This particulate matter is part of biodiesel and diesel fumes but the particles produced from biodiesel
were much less damaging to the cells than particles produced from diesel," Associate Professor Ackland explained.

"Our research found that the particulate matter from diesel exhaust stimulated a 'death pathway' response that the body uses to dispose of damaged cells. This response caused the airway cells to fuse together and die. "We saw hardly any cell death after treatment with biodiesel particulates."

Associate Professor Ackland said that the results of the study provide support for calls to move towards replacing petrol and diesel with cleaner biofuels.

"It is clear that breathing in diesel fumes is going to have a far more detrimental effect on our health than biodiesel. Given the level of cell death we have found, diesel exhaust could be the cause of respiratory disorders such as asthma and could even be implicated in cancer," she said.

The study has been published in the latest edition of the international journal Immunology and Cell Biology.

133. Industry Recognizes That Shipping Must Act on Air Emissions

Aviation has borne the brunt of environmentalists' ire for causing climate change but the global maritime industry could face similar pressure if it can't agree to curbs in greenhouse gases, industry experts warn. "Unless response happens, it's only a matter of time until that will be the case," Don Gregory, director of environment and sustainability at BP Marine, part of the oil giant BP Plc, told Reuters.

So far, shipping has avoided the same high-profile attention as the aviation sector, which accounts for about two percent of world emissions of climate warming carbon dioxide, but industry leaders say it is fast coming under the mainstream microscope.

"It is already facing that sort of pressure," said Bill Box, of the International Association of Independent Tanker Owners, one of the world's biggest tanker industry groups. "A lot of transport industries have been working on air pollution and the shipping industry may be slightly behind on that but it's certainly catching up now."

The United Nations' International Maritime Organization (IMO) in July launched a comprehensive study to assess its impact and hopes to reach a definitive conclusion by the end of the year. "As land based sources are targeted intensely in many areas of the world and shipping activities are growing together with the global economy, the contribution of ship emissions to air quality problems is growing percentage wise and is becoming more conspicuous," an IMO spokeswoman said. "Shipping is now being targeted vigorously by local and regional regulators in parts of the world to help solve local air quality problems."
Moreover, the trillion-dollar industry, which carries around 90 percent of world trade by volume on about 50,000 merchant ships, also accounts for about 10 percent of global sulfur dioxide emissions, a cause of acid rain, as well as large amounts of toxic nitrous oxide and particulate emissions.

The International Council on Clean Transportation, made up of transport and air quality officials from around the world, estimates that by 2020 shipping will produce more sulfur and nitrogen oxides than all land-based sources in the EU combined.

"Addressing carbon emissions is indeed a major challenge, especially as maritime trade is expected to continue expanding," the International Chamber of Shipping said in its 2007 annual review.

BP’s Gregory said it was essential that the shipping industry came up with its own regulations before prescriptive measures were imposed by regulators or other stakeholders. "This is almost an exponential curve of attention, of regulation and of response," he said. "What we need to do is calm that curve by responding more rapidly, and thereby alleviating some of the concerns that various stakeholders are raising with the shipping industry.

Some advocate switching from dirty high sulfur fuel to cleaner burning-distillate fuels. However, senior industry figures argue this would lead to an increase in CO2 emissions in the manufacturing process at oil refineries. Another idea is to use exhaust scrubbing devices which reduce sulfur dioxide and other particulate emissions, but this could be expensive, costing the industry billions of dollars.

Another suggestion is for new markets to trade emissions of sulfur or greenhouse gases.

The IMO also said it was essential to thrash out a long-term globally-accepted strategy. "The shipping industry, constantly moving between different jurisdictions, cannot tolerate operating in a patchwork of differing regulations," the IMO spokeswoman said. "Ideally if you know now what the standard is going to be over the next 20 years, even if it's not imposed today, you've got surety and your investment won't be stranded or wasted. That's the ideal scenario for a ship owner."

134. In Pure Arctic Air, Signs of China’s Economic Boom

From a remote snowcapped mountain in the European Arctic you can detect China in the haze. In the apparently pure Arctic air, a research station on a Norwegian island mountain ridge finds tiny chemical traces from factories in Russia, pesticides in Israel or China’s coal-fired power plants. "Some days we can definitely tell that the air has come from China," said Kim Holmen, research director of the Norwegian Polar Institute, at the station which has spectacular views over fjords, mountains and glaciers of Spitsbergen island.
The good news from a barrage of sensors is that many of the worst air pollutants, some of them linked to cancers or acid rain have declined because of clean air laws in recent decades. But greenhouse gases are surging and other pollutants are building up again even in a wilderness 1,200 km (750 miles) from the North Pole and 1,000 km from the nearest towns and factories in Russia and Norway.

A polluting haze that can blur the view in the Arctic springtime has thickened since around the late 1990s, perhaps because of more forest fires caused by climate change or rising pollution from Asia, led by China's boom, scientists say. "The Arctic haze is increasing," said Lars Otto Reiersen, head of the Arctic Monitoring and Assessment Program in Oslo. But the haze is still not as thick as in the 1980s.

Zeppelin, on a 474 meter (1,555 ft) high mountain ridge, is one of about a dozen stations in remote spots from Hawaii to Antarctica that dissect the atmosphere in a UN network. It is named after Count Ferdinand von Zeppelin, a German Arctic explorer better known for building airships.

"The air is always mixing but you can do some detective work: the particles are slightly different in the United States, Russia, China, Europe or India," Holmen said.

Emissions from cars, for instance, have a different chemical signature according to national gasoline blends. Israel is alone in using a type of pesticide on its orange trees. More ghoulishly, funeral pyres in some Asian countries release toxic mercury from fillings in the teeth of the deceased. If detected, the mercury means air did not come from Europe, North America or Japan where crematoriums have filters.

"Most of the particles we see come from Europe and Russia," Holmen said of measurements at the site, reached by a tiny cable car. "About 20 percent are from elsewhere."

Clambering up a ladder onto a snow-covered roof crowded with high-tech air-sniffing sensors, Holmen noted the clock to make sure scientists would disregard all measurements when people were outside and disrupt readings.

"When we are out here it has an immediate impact on carbon dioxide levels," he told visitors, as a chill wind blew from the Pole. People emit the gas when breathing. A recent spike in some readings was explained after a scientist spotted the tracks of an Arctic fox in snow nearby.

One of the clearest trends at Zeppelin is a rise in greenhouse gases, at the highest in more than 650,000 years according to studies of air bubbles trapped in ancient ice. Carbon dioxide levels reached about 390 parts per million this year against 270 ppm before the Industrial Revolution of the 18th century ushered in wide use of fossil fuels. Warming is widely expected to bring more heat waves, floods and rising seas.
Most greenhouse gases come from Europe and North America but the rise is quickening, perhaps again pointing to growth in developing nations led by China. But greenhouse gases are invisible and the thickening of the Arctic haze is a puzzle.

"There was an improvement in the transparency of the Arctic atmosphere until 6-8 years ago and then it started to worsen again," Reiersen said. "This is probably because of an increase in forest fires due to climate change. There are more fires in Siberia and North America and these bring more soot into the atmosphere," he said. Global warming can contribute to fires because more beetles that prey on trees survive in less icy winters. Trees infested by beetles often dry out and are more vulnerable to fires.

Overall, the world has made progress in cleaning the air since early efforts such as the US Air Pollution Control Act of 1955. Sulfur pollutants from Russian metals smelters have fallen because of laws curbing acid rain.

And a 2001 UN pact outlawed a "dirty dozen" industrial chemicals such as PCBs and pesticides, partly after they were found in the breast milk of Inuit women and in polar bear fat.

Holmen said he was trying to refine measurements -- the main disturbances are from a scientific base at Ny Alesund in the valley below, where between 30 and 130 people live.

He said he had even suggested an outdoor smoking ban in Ny Alesund. "Nobody seemed to like that idea," he said.

**135. Deal Brings HCFC Phase-Out Forward By A Decade**

World governments have reached agreement to accelerate the planned phase-out of ozone-depleting hydrochlorofluorocarbons (HCFCs) under the 1987 UN Montreal protocol on ozone layer protection. Meeting in the Canadian city that lent its name to the 20 year-old treaty, representatives of 190 signatory countries plus the European commission agreed that developed countries will reduce HCFC production and consumption by 75 per cent in 2010, and by 90 per in 2015 compared with the 1987 baseline year. Final phase-out in industrialized countries will be brought forward from 2030 to 2020.

Developing countries, meanwhile, agreed reduction steps of 10 per cent by 2015, 35 per cent by 2020, and 67.5 per cent by 2025, against a baseline of 2009-10. The final phase-out date was also brought forward 10 years to 2030.

Under the new timetable, these countries can continue using small amounts of HCFCs (2.5 per cent of the baseline) between 2030 and 2040 to extend the lifetime of certain equipment such as office air conditioning systems.
All countries also agreed to freeze global HCFC production at 2009-10 levels by 2013. In practice, the requirement will only affect developing countries as industrialized nations agreed to freeze production at 1989 levels by 2004.

Industrialized countries also pledged provide "stable and sufficient" funds to the protocol's financial instrument - the multilateral fund - to help developing countries meet the accelerated phase-out deadline.

The UN environment program’s executive director Achim Steiner described the deal as "historic", adding that it could avoid greenhouse gas emissions amounting to "several billions of tons" of carbon dioxide equivalent compared with the original timetable.

German environment minister Sigmar Gabriel paid special tribute to China for "substantially contributing to the success of the meeting". He added that the willingness of industrialized and developing countries to cooperate bodes well for the crucial climate negotiations in Bali in December.

136. Arctic Ice Hits New Record Summer Low

The Arctic ice cap shrank to a new record low of 4.13m square kilometers this summer, US research institute NSIDC has announced. The ice minimum, which appears to have been reached on 16 September, was 22 per cent below the last record, set in 2005. The low was nearly 39 per cent below the long-term average. Compared with this average, the area lost - at 2.6m km2 - is equivalent to 60 per cent of the entire EU-27 land area.

137. Ricardo Clean Diesel Breakthrough Doesn't Require NOx Aftertreatment

Ricardo recently announced that it has achieved a significant milestone in its advanced diesel research with the achievement of Tier II Bin 5 emissions from an automotive diesel engine without the use of NOx aftertreatment. This research continues with the aim of demonstrating clean diesel technology capable of achieving U.S. Super Ultra-Low Emission (SULEV) and Tier II Bin 2 requirements. By achieving this milestone, Ricardo has positioned the advanced diesel alongside gasoline hybrid and fuel cell powered vehicles as future high fuel-economy, environmentally friendly automotive products.

Started in late 2005, the early stages of the research project have been focused on developing technologies to deliver engine-out exhaust emissions without NOx aftertreatment that achieve the stringent Tier II Bin 5 US emission requirements, delivering NOx levels approximately one-sixth those of Euro 5. These technologies include advanced air handling systems, two-stage series-sequential turbocharging, advanced exhaust gas recirculation and application of closed loop cylinder pressure-based engine controls.
In parallel an advanced exhaust aftertreatment system has been developed which combines a diesel oxidation catalyst (DOC) and diesel particulate filter (DPF). When combined with engine optimization, this has delivered Tier II Bin 5 emission levels without NOx aftertreatment. Further research has established the feasibility of adding a lean NOx trap (LNT) into the system. And, through simulation and test results, early predictions indicate that the diesel will be capable of meeting the requirements of US SULEV/Tier II Bin 2 emissions standards, thereby achieving NOx levels less than one-tenth of the Euro 5 levels.

Throughout the project, a major emphasis has been placed on achieving low emissions under transient conditions to maintain or improve the fun to drive responsiveness of the engine without deteriorating emissions performance. The engine has been developed with a competitive power rating of 65kW/l to meet U.S. emissions regulations for both sea level and altitude compliance.

Having demonstrated these accomplishments on the test bed, the powertrain has now been installed in a test vehicle to enable calibration refinement and validation. In the coming months Ricardo intends to carry out extensive vehicle testing to validate the achievement of SULEV/Tier II Bin 2, currently the world's cleanest emissions standard. In doing so, the research team aims to maintain or improve engine responsiveness and customer appeal, while also delivering a significant fuel economy and CO2 improvement over current US equivalent gasoline engines.

Ricardo's development is significant because many automakers have near-term plans to launch diesel-powered vehicles, but most say they will have to rely on so-called "selective catalytic reduction" systems, or SCR, to reduce NOx emissions to levels that meet new California and federal emissions standards. The SCR systems typically hinge on injection of a urea-based solution into the exhaust stream to enable special catalytic converters to process the NOx to acceptable amounts.

The Ricardo diesel emissions system apparently mirrors a similar development by Honda which already announced it has invented an emissions system that does not require SCR to make diesels clean enough for sale in all 50 states. Honda says it will begin selling a diesel-powered Accord in the U.S. for the 2009 model year.

Ricardo says the system employs two-stage twin sequential turbochargers, advanced air-handling and exhaust-gas recirculation and in-cylinder pressure sensing to allow the engine to more precisely control combustion, while a diesel oxidation catalyst and particulate filter pitch in to achieve California SULEV and federal Tier II, bin 5 emissions levels.

Ricardo says its ultra-clean diesel is designed to generate about 87 horsepower per liter; a 2.5-liter engine could kick out in the neighborhood of 220 hp, an output competitive with many of the best current gasoline engines. In a release, the company says the engine now is installed in a vehicle to begin on-road testing and calibration in the coming months.
138. U.N. Meeting Seeks to Build Impetus to Bali

On September 24th, senior representatives from more than 150 countries urged nations and companies at a one-day United Nations high-level meeting to further efforts aimed at mitigating the effects of climate change while calling for fresh efforts and collective political will to forge a meaningful long-term plan to reduce greenhouse gas emissions. "I am convinced that climate change, and what we do about it, will define us, our era, and ultimately the global legacy we leave for future generations," U.N. Secretary General Ban Ki-moon said in remarks that opened the session.

A key objective of the meeting was to focus governments' attention on the upcoming 13th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), scheduled to be held Dec. 3-14 in Bali, Indonesia. The convention's first emissions reduction commitment period, contained in the Kyoto Protocol, expires in 2012. "The crucial negotiations under the U.N. Framework Convention in Bali in December are almost upon us," the secretary general said. "We need to set the stage for a comprehensive agreement that tackles climate change on all fronts.... We have to do what we can to reach this agreement as soon as possible to ensure a global policy is in place by 2012, when the first commitment period of Kyoto Protocol ends."

The U.N. meeting occurred just days before the Bush Administration's Major Economies Meeting on Energy Security and Climate Change, held in Washington, D.C., Sept. 27-28.

U.S. Secretary of State Condoleezza Rice, addressing delegates, said the United States takes the issue of climate change seriously because of its role as a major global economy and a major greenhouse gas emitter. She stressed the United States' willingness to participate in global solutions in association with other nations, saying the United States would "participate actively" in the Bali meeting, the United States is "firmly committed" to the UNFCCC, and the United Nations is the "appropriate forum" to address climate change.

But she also said her government's "efforts are focused on technological transformation" because future energy demand cannot be met while reducing greenhouse gases using today's conventional fuels. Innovation to create new fuels is needed, she said. "Simply put, the world needs a technological revolution," Rice said. She said the United States is "prepared to broaden our leadership in this issue" but did not outline any new technology transfer ideas or commit the United States to new spending plans to transfer environmental technologies to the developing world, though she did say innovation to create "new fuels" is necessary. Toward that end, she said the United States has spent about $18 billion since 2001 on promoting alternative energy sources.

Rice did not mention greenhouse gas emission reduction targets, which the Bush administration has steadfastly opposed, despite the willingness of European industrialized nations to commit to binding reduction targets. She did not mention by name the Kyoto Protocol, which in part established binding targets on many industrialized countries to reduce their greenhouse gas
emissions by a certain percentage by 2012 based on 1990 levels. While the European Union and other counties ratified the protocol, the United States rejected it.

Some familiar themes related to climate change emerged from the meeting, such as a need for industrialized countries in the Northern Hemisphere to help finance technology investments in the developing world and the need for developing countries to have the ability to improve their economies—which typically requires increased energy consumption and perhaps increased greenhouse gas emissions.

A chief theme of the meeting was a discussion of financial mechanisms to fund climate change solutions. Several developing nations' representatives said their countries simply cannot afford to pay for technologies to mitigate environmental damage caused by their energy infrastructure as the countries also push for economic growth. Cape Verde Prime Minister José Maria Neves and others called for access to clean energy sources at reasonable costs.

And many speakers from developing nations mentioned that while all countries have responsibilities to assist in combating climate change, the level of responsibility should vary based on a country's ability to contribute, including contributing financially.

Many African nations, meanwhile, said their willingness not to harvest forestland, which scientists believe serve as a carbon "sinks," or as absorbers and traps for carbon dioxide emissions, should be remunerated in some way. Congo Environment Minister Didace Pembe Bokiaga specifically said his country should receive $3 billion annually for not harvesting its forestlands.

And many states used their speaking time to assert their national interests. Saudi Arabia's representative, for instance, said moving away from the use of fossil fuels as a chief way to reduce emissions "is not a viable way" to cut greenhouse gases and called on research to find ways for the world to continue to use oil without damaging the environment.

And Guyana's president, Bharrat Jagdeo, said when he hears about millions or billions of dollars being spent on environmental remediation projects, "I wonder where it is going because we're not getting any of it."

When it comes to the cost of remediating damages due to climate change, "time is not on our side," Lithuanian President Valdas Adamkus said. Inaction will not only lead to environmental deterioration but its remediation will cost up to 20 times as much as preventing the damage in the first place.

Prior to the U.N. meeting, Yvo de Boer, the executive secretary of the U.N. climate change secretariat, said international climate negotiators will need a "breakthrough" agreement at the December United Nations climate meeting to ensure the next round of global greenhouse gas emissions cuts is in place to succeed the Kyoto Protocol when it expires at the end of 2012. Speaking at a Sept. 21 forum held by the Brookings Institution in Washington, D.C., de Boer
said the talks in Bali should also set a firm deadline for concluding the agreement either in 2009 or, at the latest, 2010.

Agreeing on a negotiation schedule is needed to reassure investors in the $30 billion carbon market that there will be no gap after the expiration of the Kyoto agreement, under which most developed nations agreed to curb their emissions by the end of the 2008-2012 period, de Boer said. The market was largely developed by the European Union's Emissions Trading Scheme, a cap-and-trade system used to implement emissions cuts under the Kyoto Protocol. A commitment in Bali to launch the talks would trigger negotiations that could take roughly two years to complete but still ensure there are another two years or so for nations to ratify any final agreement before the Kyoto Protocol expires at the end of 2012, de Boer said.

139. Converting All Heavy Bunker Fuel to Diesel/Gasoil: $126 Billion + CO2

A study by energy consultants EnSys Energy and Navigistics Consulting for American Petroleum Institute (API) shows that converting the entire world’s ocean ship heavy bunker fuels to low-sulfur gasoil/diesel would cost refiners at least $126 billion between now and 2020. Conversion of heavy bunkers (also known as Intermediate Fuel Oil, or IFO) to lighter distillate is one of the options under study by International Maritime Organization (IMO) for proposed amendments to Marpol Annex-6 ocean ship fuels & emissions cleanup.

The Ensys/Navigistics study not only found that converting bunkers to gasoil would be expensive, but also would cause a 7% global increase in CO₂ emissions if incremental pet coke combustion were included.

These refining CO₂ increases overwhelm whatever CO₂ reductions might be achieved in marine fuel combustion, the study shows.

What’s more, the study discovered that world estimates of bunker fuel combustion are “seriously understated.” In a related study for U.S. EPA, the investigators found that bunker fuel consumption in 2001 was 278 million tons/year, or about double what International Energy Agency (IEA) estimated for that year.

In other words, ocean vessel combustion has been widely understated while inland fuel combustion of heavy fuel oil has been overstated. The implications for the future are serious because inland fuel oil demand is stagnant whereas ship bunker demand is growing at close to 3%/year, the study noted.

The Navigistics projection sees 8.65 million barrels/day of total bunker fuel demand by 2020, including 6.76 million b/d of IFO. By contrast, the 2020 forecast using IEA basis would see only 4.23 million b/d of total bunkers by 2020, or half the Navigistics forecast.
“This greatly increases the longer term impacts on refining, markets, consumers and emissions of any marine fuel regulations,” the study authors said.

Beyond the extra capital costs for refiners to convert IFO to marine diesel oil (MDO), operating costs, fuel and hydrogen consumption would jump.

“Switching from IFO to DMB [a relatively low-carbon type of MDO] places a requirement on the refining system to largely convert vacuum and atmospheric residual plus cracked stocks into components that are of diesel quality – close to No. 2 standards – and at the same time to desulfurize the fuel from a current global average of around 3% to either 1% (2012) or 0.5% (2020),” the study said.

This would require heavy investment in hydrocracking, coking, hydrodesulfurization “plus major expansion in supporting units for hydrogen manufacture and sulfur recovery,” they said.

This would cause an average 28% cost increase for marine fuel users in 2012 (by $11.25/barrel) and a more than 33% hike (by $13.50/bbl) by 2020.

Cutting sulfur limits to 0.5% rather than 1.5% will essentially double global refining investment.

If refiners are only required to reduce sulfur levels but not convert IFO to distillate, then costs can be reduced by about 60% at an equivalent sulfur level.

If on the other hand refiners could avoid at least part of this investment by only producing low-sulfur fuels for limited “sulfur emissions control areas” (SECAs), then costs would be far less, the study shows.

“The projected global cost impacts (2020) for a scenario with multiple SECAs that require around 15% of global marine fuel at SECA standard are modest,” the study found.

“These costs increase appreciably with the proportion of global fuel that must meet the standard. The increase becomes especially sharp at or above a level of 50% of global fuel meeting the standard. Based on the 2020 cases, incremental costs (refining investments, marine fuels costs) roughly triple in going 15 to 50% of marine fuel at the more stringent standard and then triple again in going from 50% to 100%.

“These effects apply at both a 1.5% and a 0.5% sulfur standard. A first implication is that regulations (such as SECAs) that cover only limited areas will have far lower cost impacts than those which impact the majority or all of global marine fuel.

“A second implication is that there is a large incentive from a refining investment and product manufacturing cost perspective to find means – such as on-board scrubbing or emissions trading – to reduce the proportion/volume of marine fuel that must meet low sulfur standards.
“For instance, a SECA standard of 0.5% sulfur (for both IFO and MDO) – which the authors understand would enable on-board NOx reduction equipment to operate effectively – would raise marine fuel costs by 1.3% and refining investments by 2.7% with 15% of IFO (11.5% of MDO) at 1.5% sulfur; whereas these cost increases would rise to 14.8% and 29.3% respectively with 100% of fuel complying.”

### 140. ‘Advanced’ Gasoline Engines Could Start Challenging Diesels in Several Years

Rising to the challenge of tough emissions regulations – especially in the U.S., Europe and Japan – diesel engines are starting to get close to near-zero levels of particulate matter (PM), nitrogen oxides (NOx), hydrocarbons (HC) and carbon monoxide (CO). But diesel engine, vehicle, exhaust aftertreatment and ultra-low sulfur diesel (ULSD) fuel providers can’t sit on their laurels, as emerging advanced-gasoline engine technology could in just a few years undercut the fuel-efficiency and CO₂ benefits of ultra-clean diesels, at lower initial vehicle cost.

Evidence of new gasoline competition continues to grow, as was evident at last month’s annual Frankfurt Auto Show. Among the latest “advanced gasoline” technologies unveiled there were the Mercedes “DiesOtto” concept and the General Motors part-homogenous charge compression ignition (part-HCCI) engines, both of which would switch from diesel-like compression ignition to conventional (and less-efficient) spark-ignition at higher loads. Both of these engines still face years of development work before commercialization would be possible, the companies cautioned.

Meantime, at U.S. Dept. of Energy’s 13th Diesel Engine Efficiency & Emissions Reduction (DEER) conference here, Corning Inc. emissions technology expert Tim Johnson pointed up several other recent “advanced gasoline” developments, in the latest of his “Diesel Emissions Control in Review” updates. Beyond the announcements at Frankfurt auto show, Johnson cited several other recent examples of advanced gasoline technology emerging on the horizon, including the so-called “Hedge” consortium R&D at Southwest Research Institute (SwRI), as well as several private automaker, engineering consultancy and engine-maker research initiatives.

Citing a recent study by FEV, as well as his own analysis of where “advanced gasoline” would fit, Johnson estimated that light-duty passenger car “advanced gasoline” engines could achieve about 20% CO₂ reductions with an incremental cost of roughly €1,500 over today’s gasoline car. In contrast, diesel cars meeting California ultra-low emissions vehicle (ULEV) standards and achieving a similar 20% CO₂ reduction could cost roughly €1,500-3,000 more than the baseline gasoline car.

Direct-injected, turbocharged gasoline engines (GDI), and gasoline homogenous charge compression ignition (HCCI) engines likewise could achieve roughly 10-12% CO₂ reductions, at about half the cost penalty of ULEV diesels, although the diesels would get more CO₂ reductions (roughly 18-20%).
Similarly impressive CO₂ efficiency and cost gains might be realized in the medium- and heavy-duty sector through the use of advanced gasoline combustion schemes, such as the Hedge project at SwRI, he said.

Yet to be *proven*, however, is how much extra cost will be added to “advanced gasoline” engines – and what sort of technology evolutions meantime might emerge that could trim costs of ultra-clean diesel engines in future. General Motors, for instance, last month showed *Automotive News* how its upcoming 2010 U.S. EPA Tier-2, Bin-5 light-duty pickup truck diesel engine will shave about $600 off the cost of a comparable light-duty diesel engine, by swapping the conventional position of intake and exhaust port flows. That’s a huge cost savings for a diesel engine maker, and a warning to “advanced gasoline” proponents that diesel isn’t sitting still, either.

Also unknown is whether a gasoline particle filter (GPF) and perhaps a platinum-loaded sulfur trap will be needed for gasoline direct injection (GDI), which is used in (for example) the Mercedes “DiesOtto” development engine. Such a requirement might emerge for future European Union PM *number* emissions limits, or possibly similar limits being discussed at California Air Resources Board (CARB).

Like the General Motors part-HCCI gasoline engine, the Mercedes engine switches between diesel combustion and spark ignition at certain load/speed ranges. This means added cost both in controls complexity – along with higher PM number emissions. GDI also isn’t as good as diesel on fuel economy. On the other hand, GDI technology avoids high-pressure fuel injection equipment (FIE) and advanced boost, which today make diesels more expensive.

Yet advanced boost and exhaust-gas recirculation (EGR) technologies likewise are evolving. This scheme potentially could eliminate the considerable cost of NOx aftertreatment in light-duty diesels, whereas GDI and part-HCCI concepts might require a costly lean-NOx trap, and maybe even a particle trap & sulfur trap.

### 141. Study: Biofuels Cause Worse Global Warming Emissions

Growing and burning many biofuel crops may actually raise, rather than lower, greenhouse gas emissions. That’s the conclusion of a new study led by Nobel prize-winning chemist Paul Crutzen, best known for his work on the ozone layer. He and his colleagues have calculated that growing some of the most commonly used biofuel crops releases around twice the amount of the potent greenhouse gas nitrous oxide (N₂O, also known as ‘laughing gas’) than previously thought – wiping out any benefits from not using fossil fuels and, worse, probably contributing to global warming.

‘The significance of it is that the supposed benefits of biofuels are even more disputable than had been thought hitherto,’ Keith Smith, a co-author on the paper and atmospheric scientist
from the University of Edinburgh, told Chemistry World magazine. ‘What we are saying is that [growing many biofuels] is probably of no benefit and in fact is actually making the climate issue worse.’

The work is currently subject to open review in the journal Atmospheric Chemistry and Physics, and Crutzen himself has declined to comment until that process is completed. But the paper suggests that microbes convert much more of the nitrogen in fertilizer to nitrous oxide than previously thought – 3 to 5 per cent, which is twice the widely accepted figure of 2 per cent used by the International Panel on Climate Change (IPCC) to calculate the impact of fertilizers on climate change.

For rapeseed biodiesel, which accounts for about 80 per cent of the biofuels production in Europe, the relative warming due to nitrous oxide emissions is estimated at 1 to 1.7 times larger than the relative cooling effect due to saved fossil CO2 emissions. For corn bioethanol, dominant in the US, the figure is 0.9 to 1.5. Only cane sugar bioethanol — with a relative warming of 0.5 to 0.9 – looks like a better alternative to conventional fuels.

In the wake of the findings comes a recent report prepared by the OECD for a recent Round Table on Sustainable Development, which questioned the benefits of first generation biofuels and concluded that governments should scrap mandatory targets. Richard Doornbosch, the report’s author, says both the report and Crutzen’s work highlights the importance of establishing correct full life-cycle assessments for biofuels. ‘Without them, government policies can’t distinguish between one biofuel and another – risking making problems worse,’ he said.

142. Lube Oil PM Emissions Seen As Potential Health Risk in Engines Lacking DPFs

A new study published in Environmental Science Technology found that lube oil combustion particulate matter (PM) might represent a health threat that’s possibly even more significant than soot from diesel fuel combustion. The study investigated the PM emissions from a hydrogen-fueled diesel engine, in order to eliminate the impact of diesel fuel-related PM emissions.

“Recent studies suggest that trace metals emitted by internal combustion engines are derived mainly from combustion of lubrication oil,” the investigators at National Institute of Occupational Safety & Health (NIOSH), Seattle University and University of Minnesota said in their study. “This hypothesis was examined by investigation of the formation of particulate matter emitted from an internal combustion engine in the absence of fuel-derived soot. Emissions from a modified CAT 3304 diesel engine fueled with hydrogen gas were characterized.

“The role of organic carbon and metals from lubrication oil on particle formation was investigated under selected engine conditions. The engine produced exhaust aerosol with log normal-size distributions and particle concentrations between 105 and 107 cm-3 with geometric
mean diameters from 18 to 31 nm. The particles contained organic carbon, little or no elemental carbon, and a much larger percentage of metals than particles from diesel engines.

“The maximum total carbon emission rate was estimated at 1.08 g h⁻¹, which is much lower than the emission rate of the original diesel engine. There was also evidence that less volatile elements, such as iron, self-nucleated to form nanoparticles, some of which survive the coagulation process."

Asked whether the researchers investigated the impact of fitting a high-efficiency diesel particle filter (DPF) on this engine, NIOSH scientist Arthur Miller told us: “We did not test this engine with a DPF. [However], in my opinion, the DPF would likely remove the particles we were measuring, although, as with diesel engines, there would probably be a population of semi-volatile nanoparticles which form downstream of the DPF,” Miller said.

143. Gore, IPCC Share Nobel Peace Prize For Raising Awareness of Global Warming

On October 12th, Former U.S. Vice President Al Gore and the U.N. Intergovernmental Panel on Climate Change (IPCC) were awarded the Nobel Peace Prize for their efforts to raise awareness of man-made global warming.

The Norwegian Nobel Committee said it decided to award the 2007 prize to Gore and to the United Nations panel "to contribute to a sharper focus on the processes and decisions that appear to be necessary to protect the world's future climate. " "Action is necessary now, before climate change moves beyond man's control," the Nobel committee said.

The former vice president said he was honored to share the award with the IPCC and said he will donate his half of the approximately $1.5 million prize to the Alliance for Climate Protection, a nonprofit advocacy group. He said he hoped the award would serve as "a chance to elevate global consciousness about the challenges that we face now."

The Nobel committee commended Gore as "probably the single individual who has done most to create greater worldwide understanding of the measures that need to be adopted" to minimize the effects of global warming.

Since losing the 2000 presidential election, Gore has devoted much of his time to the climate change issue. Gore's documentary film, "An Inconvenient Truth," won an Academy Award in 2007; he also testified before both houses of Congress to push for mandatory controls and changes to the U.S. tax code to help "freeze" current levels of greenhouse gas emissions.

The IPCC was created in 1988 by the United Nations Environment Program and the World Meteorological Organization to prepare regular assessments of research from around the world on climate change. Work produced by the network of 2,000 scientists helped lead to the 1997
Kyoto Protocol and is expected to factor heavily in upcoming negotiations in Bali for a post-2012 international agreement to cut greenhouse gas emissions.

"Through the scientific reports it has issued over the past two decades, the IPCC has created an ever-broader informed consensus about the connection between human activities and global warming," the Nobel committee said in a statement. Renate Christ, secretary of the IPCC, said he viewed the Nobel Prize as "the most significant recognition that the IPCC has received for providing policymakers with objective and balanced information about the causes and impacts of climate change and possible response measures."

Awarding the Nobel Peace Prize to former US Vice President Al Gore and the UN climate panel widens a definition of peacemaking and will raise pressure for the world to agree a new deal to combat global warming.

"I hope this will enhance further a sense of urgency," said Yvo de Boer, the head of the UN Climate Change Secretariat who wants governments to set an end-2009 deadline to work out a new long-term plan to fight global warming.

The prize to Gore and the UN's Intergovernmental Panel on Climate Change (IPCC) which has issued reports this year outlining risks of global warming, partly targets the world's environment ministers who will meet in Bali from Dec. 3-14. The United Nations and the Group of Eight industrialized countries want them to agree a 2-year negotiating mandate to broaden the UN's Kyoto Protocol, the main plan for curbing warming, to outsiders such as the United States and China. By coincidence, the Nobel Prize will be handed out in a ceremony in Oslo on Dec. 10 -- and so gives both Gore and Rajendra Pachauri, chairman of the IPCC, a new stage to urge action. Both Pachauri and Gore were already due to visit Bali.

144. Virgin Atlantic 747 to Test Biofuel in Early 2008

British billionaire Richard Branson said his Virgin Group hopes to produce clean biofuels by around the start of the next decade and early next year will test a jet plane on renewable fuel. Virgin hopes to provide clean fuel for buses, trains and cars within three or four years, Branson told a Mortgage Bankers Association meeting in Boston. In the meantime, Virgin will be conducting a test jet flight on renewable fuels. "Early next year we will fly one of our 747s without passengers with one of the fuels that we have developed," Branson told the annual conference.

Virgin is developing biofuels for aircraft in conjunction with Boeing Co and engine-maker GE Aviation, a unit of General Electric Co. Previously, Branson had said the company would test the fuel sometime next year and that some people had said it would be late in the year.

Air New Zealand has said it plans to test a flight on a combination fuel of biofuels and kerosene in late 2008, but Virgin is trying to beat that airline by testing biofuels first.
Branson pledged last year to spend all the profit over the next 10 years from his 51 percent stake in Virgin's airline and rail businesses on fighting global warming.

He also created Virgin Fuels, which is investing US$400 million over three years in renewable energy initiatives, as part of the pledge. Biofuels, at this point mostly ethanol and biodiesel, have witnessed explosive growth this year amid record oil prices and concern about global warming. They are believed to emit less greenhouse gases because they are made from plants like corn and soybeans that absorb carbon dioxide, the main heat-trapping gas, when they grow.

Cutting emissions of heat-trapping gases from transportation sources is more difficult than cutting them from stationary sources like power plants. Power stations can switch from coal, the heaviest greenhouse gas emitter, to cleaner burning natural gas.

On Monday, Branson said jets may have problems using ethanol, the most common biofuel, which is made mainly from corn in the United States and sugar cane in Brazil. He said ethanol freezes at 15,000 feet (4,600 meters) and that butanol, a fuel similar to gasoline that can be made from biomass, may be a better alternative. It is also less corrosive than ethanol.

Virgin Fuels has invested in a small number of US ethanol projects and hopes eventually to produce branded biofuels, the company's managing partner said earlier this year.

145. Scientist Says Greenhouse Gas Emissions Hit Danger Mark

The global economic boom has accelerated greenhouse gas emissions to a dangerous threshold not expected for a decade and could potentially cause irreversible climate change, said one of Australia's leading scientists. Tim Flannery, a world recognized climate change scientist and Australian of the Year in 2007, said a UN international climate change report due in November will show that greenhouse gases have already reached a dangerous level.

Flannery said the Intergovernmental Panel on Climate Change (IPCC) report will show that greenhouse gas in the atmosphere in mid-2005 had reached about 455 parts per million of carbon dioxide equivalent -- a level not expected for another 10 years.

"We thought we'd be at that threshold within about a decade," Flannery told Australian television late on Monday. "We thought we had that much time. But the new data indicates that in about mid-2005 we crossed that threshold," he said.

"What the report establishes is that the amount of greenhouse gas in the atmosphere is already above the threshold that could potentially cause dangerous climate change."

Flannery, from Macquarie University and author of the climate change book "The Weather Makers", said he had seen the raw data which will be in the IPCC Synthesis Report. He said the
measurement of greenhouse gas in the atmosphere included not just carbon dioxide, but also nitrous oxide, methane and hydrofluorocarbons (HFCs). All these gases were measured and then equated into potentially one gas to reach a general level. "They're all having an impact. Probably 75 percent is carbon dioxide but the rest is that mixed bag of other gases," he said.

Flannery said global economic expansion, particularly in China and India, was a major factor behind the unexpected acceleration in greenhouse gas levels.

"We're still basing that economic activity on fossil fuels. You know, the metabolism of that economy is now on a collision course, clearly, with the metabolism of our planet," he said.

"We can reduce emissions as strongly as we like -- unless we can draw some of the standing stock of pollutant out of the air and into the tropical forests, we'll still face unacceptable levels of risk in 40 years time," he said. Flannery suggested the developed world could buy "climate security" by paying villages in countries like Papua New Guinea not to log forests and to regrow forests.

"That 200 gigatons of carbon pollutant, the standing stock that's in the atmosphere, is there courtesy of the industrial revolution, and we're the beneficiaries of that and most of the world missed out," he said. "So I see that as a historic debt that we owe the world. And I can't imagine a better way of paying it back than trying to help the poorest people on the planet."

146. Arctic Thaw May be at "Tipping Point"

A record melt of Arctic summer sea ice this month may be a sign that global warming is reaching a critical trigger point that could accelerate the northern thaw, some scientists say. "The reason so much (of the Arctic ice) went suddenly is that it is hitting a tipping point that we have been warning about for the past few years," said James Hansen, director of NASA's Goddard Institute for Space Studies.

The Arctic summer sea ice shrank by more than 20 percent below the previous 2005 record low in mid-September to 4.13 million sq km (1.6 million sq miles), according to a 30-year satellite record. It has now frozen out to 4.2 million sq km.

The polar thaw may herald a self-sustaining acceleration that could threaten indigenous peoples and creatures such as polar bears -- as Arctic sea ice shrinks, the darker ocean soaks up ever more heat than reflective snow and ice.

In Germany, the Potsdam Institute for Climate Impact Research says Arctic sea ice has "already tipped". Among potential "tipping elements" that are still stable, it lists on its Web site a melt of Siberian permafrost, a slowdown of the Gulf Stream and disruptions to the Indian monsoon.
"I'd say we are reaching a tipping point or are past it for the ice. This is a strong indication that there is an amplifying mechanism here," said Paal Prestrud of the Center for International Climate and Environmental Research in Oslo. "But that's more or less speculation. There isn't scientific documentation other than the observations," he said.

Many experts now reckon Arctic ice may disappear in summer before mid-century, decades before earlier forecasts. The thaw would open the region to oil and gas exploration or shipping.

"All models seem to underestimate the speed at which the ice is melting," said Anders Levermann, a Potsdam professor. "I do not believe that this is alarmist... not all tipping points are irreversible," he said. And societies can weigh up remote risks, such as planes crashing or nuclear meltdowns.

Hansen said he is seeking more study of causes of the melt, widely blamed on greenhouse gases from burning fossil fuels but perhaps slightly stoked by soot from forest fires or industries in Russia and China. Ice darkened by soot melts faster. "It is a very good lesson, because the ice sheets (on Greenland and Antarctica) have their own tipping points, somewhat harder to get started but far more dangerous for humanity around the globe," he said.

A melt of floating Arctic sea ice does not affect sea levels but Greenland has enough ice to raise oceans by 7 meters and Antarctica by about 57 meters, according to U.N. estimates.

Pachauri's authoritative climate panel, in a summary report due for release in November, does not use the phrase "tipping point" but does say: "Climate change could lead to abrupt or irreversible climate changes and impacts." It says, for instance, that it is "very unlikely" that the Gulf Stream bringing warm water north to Europe will switch off this century. That could bring a big regional cooling.

And it says that a melt of ice sheets could lead to big sea level rises over thousands of years. "Rapid sea level rise on century time scales cannot be excluded," it adds.

**147. Carmakers Seek Spark for Engine of the Future**

Delegates at the Nikkei automotive conference, in the week of the Tokyo Autoshow, reviewed the industry's progress towards new power systems in the knowledge that if they do not come up with a solution the sector may come to a halt. "In the long-term, it's very clear that on-road transportation has to decouple from petroleum for both dependency and greenhouse gas emissions reasons, and the pathway for that is electric drive," said Michael Milikin, editor of the Green Car Congress publication.

There are various propulsion technologies under study but none is without its disadvantages.
Hybrids reduce fuel consumption but still use fossil fuel; hydrogen is clean in a car but takes a lot of energy to produce; solar needs sunshine and plenty of surface area; and fuel cells are as yet too big and too expensive to make.

French engineer Guy Negre has developed a compressed-air engine, which has attracted interest from India's Tata Motors Ltd, but the technology is still in its early stages.

Minoru Shinohara, a senior vice president at Nissan, said the Japanese carmaker believed that over the next 15-20 years, the main changes in engines and emission control would come from further developments on existing engine and transmission systems. "In the long term, there is no doubt that batteries will play a big role," he told the conference.

Daniel Vieau, chief executive of US-based A123 systems, said his company was working with nano-technology to yield lighter batteries with a longer life and better power output.

The main reason carmakers were not yet using batteries more is because they are too expensive, too heavy and run out too fast.

At Japan's Sanyo Electric, board member Mitsuru Homma said battery performance needed to be boosted and costs cut before more hybrids and full electric vehicles hit the market.

While engineers and academics work on mould-breaking solutions that can save the globe, industrialists are more down to earth and take a cost-and-benefit approach. For them, there is no single solution on the horizon, but at least there is a road map.

At the moment, hybrid engines and other fuel saving technologies are within reach. Partly spurred by CO2 emission rules or measures in the European Union, Japan and California, the addition of an electric motor to a fuel engine helps reduce fuel consumption and emissions. Toyota's Prius is an example of such a car.

Skeptics, however, such as former PSA Peugeot Citroen chief Martin Folz, often say that even with a hybrid added, petrol engines do not match the performance of diesel. While popular in Western Europe, diesel is considered truck fuel at best in the United States and is even less popular in Japan.

Car parts suppliers such as Valeo or Robert Bosch GmbH have 'start and stop' or 'stop and go' technologies where an engine is shut down when the car is stationary and resumes the moment the accelerator is touched.

Other engines which do away with camshafts could cut fuel consumption by up to a fifth, and first products could be on the market by 2010.

Biofuels are already widely used in Brazil and are hitting European markets as well. Based on colza or sugar cane or other biomatter, these fuels can be mixed with diesel to cut costs and
emissions. But biofuels are condemned to remain a niche application because of all the arable land needed to fuel a big proportion of the world's car fleets, land which would otherwise be used for food and other agricultural production.