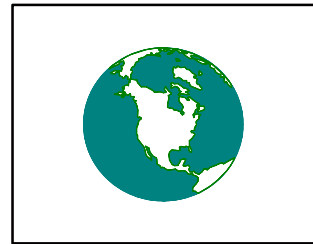


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EUROPE

1. European Commission Says New NRMM Rules Unlikely Before 2016

Revised rules on air emissions from non-road mobile machinery (NRMM), such as tractors and locomotives, are unlikely to enter force before 2016, the European Commission said recently in a written response to a parliament question. The forthcoming revision will bring small stationary engines under NRMM legislation and set new emission limits for diesel engines, says the commission.

Greek socialist MEP Kriton Arsenis wrote to the EU executive in June asking why a review of the 1997 directive on NRMM, due in 2007, had not been completed. The commission said it began preparing for the review in 2006. But the scale of the changes needed means it will not have firm proposals until 2012. European NRMM makers have struggled to meet the targets set by the 1997 directive, and its daughter directives. A series of derogations are being arranged.

2. EU Proposes Emission Standards for Recreational Boats

The European Commission has proposed emission standards for compression- ignition and spark-ignition recreational marine engines. The proposed standards are harmonized with the US EPA Tier 3 emission regulations for recreational marine diesel engines and with the EPA regulations for outboard, stern drive, and inboard marine gasoline engines.

Emission control catalysts would be required for inboard/stern drive marine gasoline engines, while the standards for all other engine categories (under the EU proposal and the final EPA regulations) can be met without aftertreatment technologies.

3. GM's Opel Mulls Partner to Share Hybrid Costs: Report

General Motors European unit Opel is considering taking on a partner in the field of fuel-saving hybrid powertrains in order to share development costs as the brand rolls out more gasoline-electric cars. According to the head of Opel, the driver is European legislation that mandates by 2020 carmakers to sell on average vehicles that emit 95 grams of carbon dioxide per kilometer.

Opel is betting the Ampera, an extended-range electric vehicle based on the Chevrolet Volt, will help. The car, which will hit markets at the end of this year at a price tag of some 40,000 euros, has already received some 6,000 orders, the press reported. In 2012, Opel hopes to sell at least 10,000 Amperas across Europe.

4. Analysis: German Rail to Run on Sun, Wind To Keep Clients Happy

It won't be easy to run a national railway on renewable energy like wind, hydro and solar power but that is what Germany's Deutsche Bahn aims to do for one simple reason: it's what consumers want. Deutsche Bahn says it wants to raise the percentage of wind, hydro and solar energy to power its trains from 20 percent now to 28 percent in 2014 and become carbon-free by 2050.

Prevailing attitudes in Germany were already decidedly green before the Japanese Fukushima nuclear accident in March prompted a head-first dive into renewables. The Berlin government abruptly reversed course on nuclear power, shutting eight nuclear plants and vowing to close

the other nine by 2022. That caught Deutsche Bahn -- and German industry -- off guard. The state-owned railways had relied heavily on nuclear energy. But now the public and industry are increasingly attuned to sustainability and what companies are doing.

There are still concerns about the reliability of renewables as their share rises toward 100 percent and before more storage capacity is available. What happens when there is no wind or sunshine?

The railway's new push for a larger share of renewable energy to operate trains that transport 1.9 billion passengers and 415 million tons of freight each year has won applause from environmental groups. They have cheered Deutsche Bahn's partnerships with wind and hydroelectric power suppliers and its exploratory moves into harvesting solar power from the roofs of its 5,700 stations. Photovoltaic panels in the spectacular glass roof of Berlin's main station produce 160,000 kw/h of electricity a year -- meeting about 2 percent of the Hauptbahnhof station's needs. Previously, environmentalists had accused the company of neglecting to develop renewables on its vast properties and because of its heavy reliance on nuclear.

High speed trains have CO2 emissions per passenger per km of 46 grams, compared with an average 140 for cars and 180 for planes. The railway's high speed trains zip across the country at up to 300 kph (186 mph). By 2014 a third of the electricity for long-distance trains will come from renewable sources. Deutsche Bahn also operates myriad local rail operations in towns and cities. Some operations, such as local railways in Hamburg and Saarland, already run on 100 percent renewable energy and proudly boast about that in advertising.

To run its trains the railways use a staggering amount of electricity every year: 12 terawatt hours. That is as much as Berlin with its 3.2 million residents consumes. The railways alone use 2 percent of Germany's total electricity. A single high-speed ICE train traveling from Frankfurt to Berlin uses up 4,800 kw/h, enough for a four-person family for a full year.

Germany is already a world leader in renewable energy. About 17 percent comes from renewables, up from 6 percent in 2000. The German government aims to raise that share to 35 percent by 2020 and 80 percent by 2050. Witschke said Deutsche Bahn will have 35 or 40 percent by 2020 and 100 percent by mid-century. To help meet that target, Deutsche Bahn has been operating two wind parks in Brandenburg and in July signed a 1.3 billion euro deal with utility RWE to get 900 million kw/h a year from 14 hydroelectric plants -- enough for 250,000 households. The hydroelectric deal with RWE runs for 15 years and will supply the railways with about eight percent of its needs.

5. Volkswagen on Road to Carbon-Free Car: Report

Volkswagen will soon unveil one of the first single-seater cars, with the potential for zero emissions, the Financial Times has reported. VW's one-seat concept car will illustrate the carmaker's ambitions to build electric vehicles that generate no carbon dioxide, the FT said, citing the company's head of research, Jurgen Lehold.

The German carmaker also plans to offer a "full-service package" for customers of its electric cars by selling them power from renewable sources. It is planning to build two hydropower plants in Brazil. Lehold said the car's CO2 count "depends on what kind of electricity you put in the battery," but if it was powered from renewable sources, it would be "zero."

6. Another German State Plans Binding CO2 Target

Baden-Württemberg, one of Germany's largest and richest states, is looking to adopt a binding CO2 reduction target of 90% by 2050. It follows North Rhine-Westphalia, which put forward a similar plan last year. Both states are governed by a Green/SPD coalition.

If adopted, Baden-Württemberg's climate change target will be stricter than the non-binding 80% goal set by the federal government. A report will be commissioned to recommend intermediate targets for 2020, 2030 and 2040, according to a state spokesman. These targets will not necessarily be stricter than the ones set by Angela Merkel's government. "They should first of all enable us to reach the goal for 2050." Berlin aims to cut CO2 by 40% by 2020, 55% by 2030 and 70% by 2040.

An expert panel created by Baden-Württemberg's environment ministry will discuss the plan in September. It will draw on the experience of North Rhine-Westphalia. The state, which accounts for a third of Germany's emissions and is home to a number of energy-intensive plants, had to delay its own plan in May after protests from industry.

North Rhine-Westphalia's initial target of up to 95% was significantly watered down in a first draft of the proposed carbon reduction law published in June. The state now aims for an 80% reduction by 2050. New renewable energy installations would be given priority over other sources, a proposal that has been criticized by large energy firms.

According to environmental group Deutsche Umwelthilfe (DUH), some legal experts question the right of German states to implement climate protection laws. DUH does, however, say it is possible for states to take complementary action in areas where no federal law exists; for example, regional planning procedures.

Since May this year, Baden-Württemberg has been governed by Winfried Kretschmann, Germany's first state prime minister from the Green party. The state is home to one of the country's main industrial centers, including carmakers Daimler and Porsche. In 2008, it emitted 82.3 million tons of CO2 equivalent, or 8% less than in 1990.

7. Brussels Consults on Alternative Transport Fuels

The European Commission is consulting stakeholders on its plans for an alternative fuel strategy due early next year. The aim is to help create an EU transport system that is oil-free and largely CO2-free by the middle of the century. The strategy is being developed through the commission's Clean Transport Systems initiative, which also includes a scoping study. It could be accompanied by legislative proposals on the infrastructure requirements of alternative fuels.

Stakeholders are being asked whether the EU should take a technology-based approach, giving preference to certain fuels or technologies, or a technology-neutral strategy centered around performance criteria. The commission also wants to know which alternative fuels are best suited to particular types of transport.

Moving to alternative fuels was a key objective in the EU executive's transport white paper, which was unveiled in March. The consultation closes on 6 October.

8. Congestion Charge Opponents Pan "Flawed" Copenhagen Proposal



Plans for a congestion-charging zone around Copenhagen have been widely criticized with claims that the plan is ineffective and costly and that road pricing would be a better solution to tackling congestion.

The zone has been proposed by the opposition Social Democrats and the Socialist People's Party in order to reduce motor traffic in the city by 40 percent and raise money to reinvest in public transportation.

"It's a pain to drive in the capital today. Motorists have to sit in

queues for half an hour when entering or leaving the city. It results in lost earnings and a massive bill for society," Magnus Heunicke from the Social Democrats said.

According to the two parties, congestion on the city's roads results in 130,000 hours of lost work hours, at a cost of seven billion kroner in lost earnings.

"Congestion charges have been successfully introduced in cities such as London and Stockholm where traffic has been reduced by up to 20 percent. We would invest the revenue from the congestion charge back into public transportation," Heunicke said.

According to recently released details, by 2012 toll facilities would be set up at the city's northern edge, along Ring Road 2, and through inner Amager to the south. Fees to enter or leave the zone would vary depending on the time of day, but according to the proposal rush hour fees would be 25 kroner. The yearly cost to a commuter crossing the toll ring daily during the rush hour would amount to 11,100 kroner.

Two billion kroner total is expected to be generated from tolls, however, and this money would be put towards reducing the price of public transport by 40 percent, resulting in an average savings of 5,192 kroner a year.

Despite this, the Social Liberals have criticized the plan, and have suggested that a 'pay-as-you-go' road pricing system would be more effective.

"We are more concerned with moving traffic and freight from the main roads to public transport which would make 'road-pricing' the most long-sighted and proper solution for the whole country," said Johannes Poulsen, a Social Liberal MP.

"The brilliance of road pricing is that you can regulate how much motorists pay according to how much they drive, where they drive, when they drive and what they drive. And motorists from areas without public transport would not pay," he added.

Harry Lahrmann, a traffic researcher with Aalborg University, also argued that road pricing is a more effective solution and that the congestion charge would create more traffic from motorists taking detours. "Experience from England and Sweden suggests that while traffic within the

zone decreases, it increases outside it,” Lahrmann said. “Motorists will still be queuing on the Køge Bay Motorway if a congestion charge is introduced. Road pricing using GPS is the only real solution.”

The prime minister’s Liberal Party also dismissed the plan. “The charge will arbitrarily affect people, create barriers, reduce mobility and is an extra tax on motorists who need to go in and out of Copenhagen to do their work,” Liberal traffic issues spokesperson Christian Pihl Lorentzen said. “If you want people to use public transport, you have to assume that there will be the space for them. But the capacity in busses and trains are already pushed to the maximum during rush hour where people are forced to stand. The proposal is flawed.”

The potential stress the charging zone would have on the public transport network has led to calls for rail operator DSB to state whether they could cope. Despite an initial assurance that they would be able to handle an increase in passenger numbers of 50 percent, managing director Christian Roslev sounded less sure subsequently. “DSB’s current economic situation shows that we have to be especially thorough in our analyses and have a financially stable basis before we can reveal what we can do,” he told Politiken newspaper.

Motoring lobbyist group FDM has also argued that drivers in Denmark are already heavily taxed and for many people driving is the only solution to their work and family commitments. “As opposed to motorists in Sweden and England, Danish motorists have already paid for three registration charges. With a congestion charge they would be forced to pay an extra tax of about 1,000 kroner a month,” Thomas Møller, the managing director of FDM, said.

“It would affect commuters who drive in and out of Copenhagen daily to go to work and don’t have an alternative to driving, such as families with children or nurses who live in the city but work at a suburban hospital and who work at times when public transit doesn’t run as frequently.”

The Danish Chamber of Commerce has also leveled criticism at the plan, claiming the charging zone would adversely affect trade and business in the city. “It’s of course responsible to determine future sources of finance for welfare. But the problem here is that the balance has tipped,” Jesper Højte Stenbæk, the chamber’s transport issues spokesperson, said. “The toll ring is being implemented to finance better public transport. While that’s fine, the impact on trade and business in the city center are too great. It will make it more expensive for business to get their employees to work, to deliver goods to shops and for customers to get in. It will mean less life in the city.”

9. EU Commission Seeks Input to Guide Next Generation of Air Quality Legislation

The European Commission is seeking comments on the European Union’s air quality laws as the first step in a general review expected to result in legislative proposals in 2013. The bloc’s top environment official, Environment Commissioner Janez Potocnik, said the consultation is intended to “start a discussion on the next generation of [EU] air quality objectives.” The consultation runs through September 30th.

Comments are sought on public and professional awareness of EU air quality legislation, the strengths and weaknesses of current laws, and implementation by national governments of laws agreed to at the EU level. In particular, the consultation asks for input on the EU Ambient Air Quality Directive (2008/50/EC), which sets limits on fine particle pollution in air, and the related Directive 2004/107/EC, which establishes target values for arsenic, cadmium, mercury, nickel, and polyaromatic hydrocarbons in air.

EU air quality legislation is considered to have a mixed record, with some improvements in air quality but many countries struggling to keep within pollutant limits, especially in urban areas. The Commission said about half of Europeans live in areas where air quality thresholds are exceeded.

In 2010, the Commission postponed a review of another air quality law, the National Emissions Ceilings (NEC) Directive (2001/81/EC), which regulates emissions of sulfur dioxide, nitrogen oxides, volatile organic compounds, and ammonia, amid concerns that EU countries were unable to meet some air quality targets. The Commission said the NEC Directive would be considered as part of the 2013 review.

The Commission said that, despite dramatic declines of some pollutants in air as a result of tougher air quality laws, air pollution still contributes to 500,000 premature deaths annually in the European Union.

The consultation period began June 30.

10. EU to Lower Sulfur Content in Shipping Fuels to Meet IMO Standards

On July 15th, the European Commission proposed legislation that would bring EU limits on the sulfur content of shipping fuels into line with International Maritime Organization (IMO) standards. Under the measure, sulfur content would be cut in stages from the current limit of 4.5 percent by weight to 0.5 percent in 2020. In some more sensitive maritime areas, designated as sulfur emission control areas (SECAs), the limit would be reduced from the current 1.5 percent to 0.1 percent by 2015. These reductions are the same as those set out in IMO Regulation 14, which went into effect in July 2010.

However, the Commission said the European Union should go further than the IMO regulation by applying the tighter SECA fuel standard to all passenger ships, regardless of whether or not they are operating in a SECA. IMO has designated three EU maritime areas—the Baltic Sea, North Sea, and English Channel—as SECAs because they are considered particularly vulnerable to sulfur dioxide pollution.

The European Parliament and EU Council, which represents the governments of EU member states, must endorse the legislation before it can come into force. The measure would amend Directive 1999/32/EC on reducing the sulfur content of certain liquid fuels.

EU Environment Commissioner Janez Potocnik said shipping emissions have an impact “far beyond coastal areas” and updated legislation would “help resolve the persistent air quality problems that continue to affect millions of Europeans.” According to a consultation on air pollution published by the Commission in June, about half of Europeans live in areas in which limits on pollutants, including sulfur dioxide, are exceeded.

The Commission said that tightening shipping fuel sulfur limits would be a contribution to a general revision of air quality legislation to be published in 2013.

In addition, formalizing the IMO standards through EU law would “strengthen the effectiveness of these standards as they would be monitored and enforced under the EU regime, which is more effective than the international system,” the Commission said.

The industry group European Shippers' Council said the SECA limits were being introduced too quickly. It said there is "insufficient refining capacity" to supply low-sulfur shipping fuel, which could lead to shipping freight being displaced onto the roads in some parts of Europe.

The proposals should reduce SO₂ emissions by up to 90%, and fine particle emissions by up to 80%, according to estimates by the Commission.

Ships will be allowed to use equivalent technologies--such as exhaust gas scrubbers--in lieu of using low sulfur fuels. The proposal should be phased in from 2015 to 2020. In the meantime, the Commission will develop, in 2012, a series of medium and long-term measures within the framework of a "Sustainable Waterborne Transport Toolbox" to foster sustainable and competitive short sea shipping.

11. Swiss Report Notes Pollution Reductions But Failures On Climate, Biodiversity

Switzerland has made notable progress in reducing air, water, and soil pollution but has failed to achieve its targets in climate change and biodiversity conservation, according to an environmental overview issued by the Swiss government on July 13th. The report from the Federal Office for the Environment and the Federal Statistical Office said "considerable progress has been achieved in the area of environmental protection in recent decades." "For example, pollution by heavy metals, dioxins, polychlorinated biphenyls (PCB) and persistent organic pollutants (POPs) has decreased," the Swiss agencies said. The quality of surface waters and groundwater "is generally good" and remediation of contaminated sites is "proceeding apace."

"A look beyond the borders of Switzerland confirms that Switzerland is performing well on environmental issues compared with other European countries," the report said. "For example, at 11 percent, organic farming accounts for a relatively high proportion of farming in Switzerland." Nevertheless, "the situation in Switzerland is far from perfect when it comes to the environment," the agencies said.

For example, improvements in air and water quality have stalled since the turn of the millennium. Ambient air quality standards for coarse particulate matter, ozone, and nitrogen dioxide are "still being exceeded by a substantial margin and the level of micropollutants in lakes and rivers remains problematic."

On climate change, "there are no successes worthy of mention to report from the Swiss perspective," the agencies add. Switzerland's total greenhouse gas emissions have remained more or less constant since 1990, totaling 51.8 million metric tons of carbon dioxide-equivalent in 2009. "The purchase of foreign emissions certificates will be necessary, therefore, to enable us to achieve our Kyoto [Protocol] target" for reducing greenhouse gas emissions, the agencies said.

Swiss efforts to conserve biodiversity also have stagnated, the report said. "It has not yet been possible to halt the loss of animal and plant species and the decline in their habitats," the agencies said, although there has been some success in decelerating developments contributing to biodiversity loss, such as urban sprawl and increased energy consumption.

12. Denmark to Require Low-Pollution Labels On All Foreign Trucks in Urban Zones

Starting on November 1st, Denmark will require all foreign commercial vehicles to display Danish environmental labels before they can be driven into four densely populated urban areas in an effort to reduce air pollution. Detailed in a July 1 Environment Ministry statement, the new rules will apply to all diesel-powered vehicles entering the cities of Copenhagen, Aarhus, Aalborg, and Odense. The requirement will affect foreign companies making deliveries in Denmark as well as haulage companies and operators of other commercial vehicles such as tourist buses. It will apply only to designated "environmental zones" covering each city's central area.

Currently, all domestic-registered vehicles weighing more than 3.5 metric tons that do not conform to EU-wide Euro 4 emissions standards for air pollutants are banned from these zones, but foreign-registered vehicles are exempt. Under the new rules, owners of foreign vehicles will have to apply online or by mail for a label certifying that their vehicles' engines adhere to Euro 4 requirements. Owners will have to submit a registration certificate documenting their vehicles' emissions class and, for older models, a certificate confirming that the vehicles have been retrofitted with a qualifying particulate filter. A website has been set up explaining the requirements in six languages.

Environmental Protection Agency spokeswoman Vibeke Vestergaard told reporters on July 8th that owners of vehicles that meet the emissions requirements but lack a label could face a fine of 5,000 kroner (\$960). The driver of any vehicle not displaying a label and not meeting the requirements will be fined DKK 5,000, she said, while the responsible company will face an additional DKK 15,000 (\$2,900) fine.

"Each day several hundred foreign trucks and buses drive into Danish environmental zones," Environment Minister Karen Ellemann said in a July 7th statement. "It is therefore quite logical that the police should have the same opportunities to check these foreign vehicles [as Danish vehicles]. The new label requirement is a key tool to help the police identify vehicles that fail to meet the requirements."

Environmental zones first came into force in Copenhagen and the neighboring municipality of Frederiksberg in 2008. Since then, the requirements have been tightened and the zones have been extended to the provincial cities. According to recent government figures, particulate emissions in Copenhagen and Frederiksberg have fallen by about 60 percent since 2008.

13. Reducing CO2 Emissions From Cars Through Eco-Innovation

The automotive industry will have a greater incentive to invest in new technologies that reduce CO2 emissions from new cars, under legislation recently adopted by the European Commission. The Regulation enables motor manufacturers to receive recognition for CO2 savings achieved by fitting new cars with approved "eco-innovations" which reduce emissions. These savings will help the industry meet the European target of limiting CO2 emissions from new cars to an average of 130 grams/km by 2015. Eco-innovations will count for up to 7 g CO2/km towards the target.

Under the Regulation, a technology can qualify as an eco-innovation if it is new to the market, contributes to significant CO2 savings and is not otherwise taken into account in determining the level of CO2 emissions from vehicles. The technology should also aim at improving vehicle propulsion or the energy consumption of devices that are mandatory, without compromising vehicle safety. This means, for instance, that solar panels converting sunlight into electric energy could potentially qualify as an eco-innovation but an energy-efficient in-car music system would not.

The Commission will assess applications submitted by car manufacturers and component suppliers and adopt decisions approving generic eco-innovations. The actual CO₂ savings from the eco-innovations for each specific car will be certified as part of the vehicle type approval procedure.

EU legislation requires that by 2015, CO₂ emissions from all new cars registered in the EU should not exceed 130 grams/km, around one-fifth below 2007 levels. The target will be gradually phased in: in 2012 65% of each manufacturer's newly registered cars must comply, rising to 75% in 2013, 80% in 2014 and 100% by 2015. Manufacturers whose fleet average exceeds the limit from 2012 will have to pay a penalty for each car registered.

14. Portugal Wins, Sweden Loses in Europe's Vehicle CO₂ Rankings

In the last few years, Europe as a whole has made a variety of efforts to reduce carbon emissions, by encouraging use electric and hybrid vehicles as well as of alternative modes of transportation. But despite the group effort, some countries are far ahead of others. Presented last month and reported by Le Figaro, the results of a study looking at carbon emissions per vehicle by the French Environment and Energy Management Agency (ADEME) show Portugal leading the pack, with France and Denmark just behind. Last place goes to Sweden, closely followed by Germany.

The study, which only examined Western Europe (minus Norway and Switzerland) ranked each country on the average number of grams of CO₂ emitted per kilometer. The results ranged from 129g (Portugal) to 153g (Sweden) with most falling in the 130s.

Sweden's last place score is something of a surprise, given the country's green car explosion. Considering that Germany is the land of "elite driving machines," (and also home to Europe's dirtiest power), its score is more expected.

But despite the disparity of scores, the ADEME study produced encouraging results. The average emission rate for European vehicles has fallen by 45 grams/kilometer in the last 15 years and by 20 grams in the last five. That means the continent is on its way to achieving its goal of 95g/km by 2020, though it still has plenty of work to do. It just needs Germany and Sweden to catch up.

15. Germany's Upper House Approves Revised CO₂ Classifications for Vehicles

On July 8th, the upper house of Germany's Parliament approved legislation that would alter the criteria for vehicles' carbon dioxide classification to simplify consumer labels and emissions restrictions for city centers, though environmental groups say the changes would mislead consumers. Since 2007, all German vehicles have been graded by law into three classes, receiving a red, yellow, or green badge according to the amount of carbon dioxide they emit. The labels are intended to inform consumers about their choice of vehicles and also to determine whether a vehicle is allowed to enter restricted "environmental green zones." These low-emissions zones have spread to numerous German cities over the past three years.

The bill would base the classification on the ratio of a vehicle's weight to its carbon dioxide emissions, effectively extending the criteria for green and yellow badges to include sport-utility vehicles.

The legislation is awaiting changes from the Ministry of Transportation unrelated to the labeling portion before the upper house can give its final approval, which is the last step to complete the new ordinance. That is expected to happen by the end of the summer, according to a parliamentary spokeswoman.

The transportation sector contributes one-fifth of Germany's total carbon dioxide emissions, and the Environment Ministry said this share has been rising over the past decade. Stricter carbon limits on passenger cars within the European Union, to be set in 2013, are expected to help push the trend toward smaller, lighter cars in EU member states. But the German car industry continues to lag behind other European nations and Japan in efforts to reduce carbon dioxide emissions from vehicles, industry analysts have said.

Environmental activists say this legislation is just one more example of the German government favoring the car industry over environmental goals and consumers. Environmental groups are calling on the European Commission to block the proposed legislation, which they say violates the European Union's Directive 1999/94/EC prohibiting car labels "if their display might cause confusion to potential consumers of new passenger cars."

The Bundesrat rejected a proposal by its environment committee to reserve the A and B efficiency classes for cars that emit less than 130 grams of CO₂ per kilometer. But it asked the government to revise the calculation formula within three years because it could confuse consumers and undermine the label's reputation, the house said.

Carmakers association VDA said the label would lead to larger CO₂ reductions than a system that ignored vehicles' weights. Manufacturers will have to make cars in every weight category more efficient to earn an A label, not just large vehicles, it argues. Brussels-based T&E calculates a Land Rover Discovery would receive a better rating than a Fiat Panda and Verkehrsclub Deutschland (VCD) says labels should be based on a car's size rather than its weight.

Media reports suggest France and Italy have complained to the European Commission about the label. They fear it would adversely affect their producers, which tend to make smaller vehicles, and breach EU competition rules.

On a different issue, VCD and another green group, Deutsche Umwelthilfe, have also called for limits on the fine particulates emitted by petrol engines. Vehicles with direct petrol injection examined by the groups emitted twice as many fine particles as diesel engines.

16. Climate Impact Threatens Biodiesel Future in EU

Europe's biodiesel industry could be wiped out by EU plans to tackle the unwanted side effects of biofuel production, after studies showed few climate benefits. Europe's \$13 billion biodiesel industry, which has boomed in the wake of a decision by Brussels policymakers in 2003 to promote it, is now on the verge of being legislated out of existence after the studies revealed biodiesel's indirect impact cancels out most of its benefits.

The EU has been arguing for two years over the extent of indirect damage to the environment caused by it setting a target of increasing biofuel use to 10 percent of all road fuels by 2020, from less than three percent today. Its own analysis shows the target may lead to an indirect one-off release of around 1,000 megatons of carbon dioxide -- more than twice the annual emissions of Germany.

The emerging picture that the EU has got its policy wrong has proved unpalatable, and the European Commission has refused a freedom of information request from the press for the latest studies, arguing the public interest of disclosure is insufficient. However, those documents have now been leaked.

"This would have significant implications for the existing EU biodiesel industry," said one of the leaked reports, an impact assessment prepared by the Commission. "The viability of existing investments could be affected in the long run, as the availability of conventional biodiesel feedstocks would be extremely reduced," it said. The findings could have a major impact on the direction of investments by major oil companies such as BP and Royal Dutch Shell in low-carbon energy sources, and give a boost to firms involved in the development of next-generation biofuels from non-crop sources, such as Danish enzymes producer Novozymes and Spain's Abengoa.

In a second report, global biofuel experts warned that increased biofuel production driven by the EU's green energy targets will squeeze food supplies and increase global hunger. "Any decline in consumption can have a severe impact for households that are already malnourished," said the report from a Commission workshop of international biofuel experts last November.

Biofuels were once seen as a silver bullet for curbing transport emissions, based on a theory that they only emit as much carbon as they absorbed during growth. But that has been undermined by a new concept known as "indirect land-use change" (ILUC), which scientists are still struggling to accurately quantify. In essence, it means that if you take a field of grain and switch the crop to biofuel, somebody, somewhere, will go hungry unless those missing tons of grain are grown elsewhere. The crops to make up the shortfall could come from anywhere, and recent research shows the majority of new farmland, possibly as much as 80 percent, is created by cutting down forests. Burning forests to clear that land can pump climate-warming emissions into the atmosphere, enough in theory to cancel out any of the climate benefits the biofuels were meant to bring.

"The experts unanimously agreed that, even when uncertainties are high, there is strong evidence that the ILUC effect is significant," said the report from the Commission's November workshop.

"The land use change effects make nearly half of the expected gains of shifting from fossil fuels to renewable biofuels disappear," said a third report by the International Food Policy Research Institute (IFPRI) for the EU.

Biodiesel from Asian palm oil, South American soy beans, and EU rapeseed all had a bigger overall climate impact than conventional diesel, said a fourth leaked document. "Ethanol feedstocks have a lower land use change effect than the biodiesel feedstocks. For ethanol, sugar beet has the lowest land use emission coefficients," said the IFPRI report.

The Commission's impact analysis predicts EU demand for biodiesel will collapse if their indirect impacts are taken into account in EU legislation. But at the same time it sees a sharp rise in demand for bioethanol from cereal crops and sugarcane, as well as advanced biodiesel produced from algae. "Ethanol production capacity would need to be increased significantly to make up for the increased demand," it said. The report said this shift in demand would be reflected in commodity markets, pushing down vegetable oil prices and to a lesser extent increasing the cost of sugar and grains.

17. Commission Urged To Propose ILUC Criteria

A group of cross-party MEPs and NGOs has urged the European Commission not to shy away from proposing feedstock-specific criteria to tackle the risks of indirect land use change (ILUC) associated with biofuels. In separate letters to the commission, the MEPs and NGOs insisted increasing the minimum emission saving threshold for biofuels – another option considered by the EU executive – was not the solution to deal with ILUC impacts.

The letters were sent ahead of a meeting of commissioners to discuss the issue. The commissioners for climate change and the environment have reportedly supported setting crop-specific ILUC criteria. But their industry and energy colleagues have been opposed to this option because it could harm industry.

According to Green MEP Claude Turmes, Connie Hedegaard seems to have agreed in the last week with industry commissioner Günther Oettinger to go for a higher emission saving threshold. But the commission would not confirm this.

Several sources said they were still confident the EU executive would put forward a proposal by the end of this month. The directives on renewable energy and fuel quality adopted in 2009 require that it addresses any possible ILUC impacts.

A European Parliament report published earlier this year has concluded that introducing feedstock-specific ILUC criteria is the only valid option. In their letter, the MEPs also note that a similar approach has already been implemented in California, with ILUC values regularly reviewed according to scientific progress. Internal commission reports recently leaked to the press (see above) appear to show that the indirect impact of meeting the EU's 10% renewable energy target for transport is very high. The EU executive has been accused of secrecy over such impacts.

The first letter was signed by several influential MEPs including environment committee chair Jo Leinen, liberal MEP Chris Davies, center-right MEP Sirpa Pietikäinen and Mr Turmes. The green groups behind the other letter include EEB and Greenpeace.

18. Commission Approves Seven Biofuel Schemes

The European Commission has named the first seven biofuel certification schemes to win its approval. Fuels certified under the voluntary schemes will be assumed to meet EU sustainability criteria and can be counted towards its biofuel targets. The seven approved schemes include three multi-stakeholder roundtable initiatives: the Roundtable of Sustainable Biofuels (RSB), Roundtable on Responsible Soy (RTRS), and Bonsucro EU, a scheme certifying biofuels from sugar cane. The others are French industry scheme 2BSvs, industry-led schemes from Agengoa and Greenergy – another scheme for sugar cane-based biofuels – and the German government-funded International Sustainability and Carbon Certification.

The following seven voluntary schemes for biofuels sustainability have been recognized by the Commission:

- 19. ISCC (German, government financed scheme covering all types of biofuels)**
- 20. Bonsucro EU (Roundtable initiative for sugarcane based biofuels, focus on Brazil)**
- 21. RTRS EU RED (Roundtable initiative for soy based biofuels, focus on Argentina and Brazil)**
- 22. RSB EU RED (Roundtable initiative covering all types of biofuels)**
- 23. 2BSvs (French industry scheme covering all types of biofuels)**
- 24. RSBA (Industry scheme for Abengoa covering their supply chain)**
- 25. Greenergy (Industry scheme for Greenergy covering sugar cane ethanol from Brazil)**

The renewables directive (RED) says biofuels cannot come from recently cleared areas of high biodiversity or carbon content. They must deliver savings of at least 35%, rising to 50% for existing production facilities in 2017 and 60% for new installations in 2018.

The seven schemes were tested on their compliance with the directive's criteria but also on the quality of their audit processes and measures to prevent fraud. The commission published assessments for each one of them. These show three schemes – Bonsucro, 2BSvs and Greenergy – are not able to guarantee protection of biodiverse grasslands. According to the commission, these schemes will not attempt to claim compliance with this element of the RED criteria.

The disclosures were not detailed enough to satisfy NGO Client Earth. It tried unsuccessfully to obtain details of the approval process and last month filed a lawsuit against the commission over its failure to disclose the information.

WWF is a member of the three roundtable schemes and believes they help create a level playing field for more sustainable biofuels. But the environmental group is still unhappy with the EU's criteria. "Highly biodiverse grasslands are not defined, and effects from indirect land-use change are not taken into account," it said.

Another 18 schemes are being considered by the commission. The seven approved so far were the first to apply. A second batch of approvals will be announced in October.

26. Lufthansa Launches Biofuels Trial

German airline Lufthansa has launched a six-month biofuel trial worth €6.6m which it claims will help reduce CO2 emissions. However, green groups fear the move could produce emissions up to six times greater than fossil fuels. Lufthansa is one of four airlines to have pledged to use two million tons of biofuels annually by 2020. They say the fuel will come from sustainable sources.

The chosen fuel mix, made by Finnish-run Neste Oil, consists of camelina and animal fats, but mainly jatropha. Action Aid and Friends of the Earth say the expansion of jatropha crops drive land-grabs and ultimately create more emissions than they save.

The biofuel is backed by the Round Table on Sustainable Biofuels (RSB). But this certification scheme is industry-led and likely to mislead the public, say the NGOs.

27. EU Parries China's Jab on Aviation Emissions Scheme

Including aviation in Europe's emissions trading scheme (ETS) is key to limiting greenhouse gases and climate change, the European Union said recently, defending strict plans that have

prompted China to cry foul. The EU's ETS will compel airlines flying to or from Europe to buy permits for 15 percent of the carbon emissions they produce beginning in 2012, adding them to the 11,000 factories and power plants already in the scheme. China has resisted, and a commentary by China's state Xinhua News Agency reflecting the government's stance said the plan was poorly designed, costly and unfair for developing countries.

But an EU statement sought to set the record straight, framing the scheme as a fair and cost-effective way to reach climate-change goals. "It is an important part of the EU's action to reduce emissions of greenhouse gases associated with Europe and to limit climate change to 2 degrees Celsius," said a statement from the EU Delegation in China.

Even with the scheme, aviation emissions in Europe from international flights are projected to be 300-700 percent higher than 2005 levels by 2050, the statement said, adding that the regulations applied to "all airlines regardless of nationality".

It said the economic impact of the trading scheme would be only a small percentage of current fuel costs, which airlines were likely to pass on to consumers, most from the EU heading to other developed countries. "Flights to and from China would account for less than 3 percent of total aviation emissions covered by the EU system," it said.

The China Air Transport Association has said the scheme would cost Chinese airlines 800 million Yuan (\$123 million) in the first year and more than triple that by 2020. At least 16 Chinese airlines have the right to fly to Europe, with 11 operating regular services. Among the most affected will be Air China Ltd, China Southern Airlines Co Ltd and China Eastern Airlines Corp Ltd.

Other international carriers, including U.S. airlines, have been vocal critics of the plan to include aviation in the bloc's \$120 billion trading scheme.

Non-EU carriers will have to pay carbon costs based on the entire journey, something that angers Asian airlines in particular because of the long distances to Europe.

"The EU needs to listen to the concerns of the rest of the world and rethink its plan now," Xinhua said. The EU's statement said the EU was not seeking "double regulation" of emissions.

"In relation to the measures that China is taking on CO2 emissions from aviation, the EU is happy to discuss with the Chinese government about the possibility of excluding all flights to the EU departing from China from the EU system, for all carriers," it said.

28. ACEA Publishes Guidance on Compliance with Europe's REACH Law

On July 12th, the European Automobile Manufacturers' Association published guidance for carmakers on complying with the European Union's REACH chemicals law. The detailed guidance, comprising an 80-page summary document and 16 annexes, is intended to help automakers comply with obligations such as notifying the European Chemicals Agency (ECHA) about the use of hazardous substances in vehicles, communicating the uses of chemicals up and down the supply chain, and obeying substance use restrictions, according to ACEA.

REACH (Regulation (EC) No. 1907/2006 on the registration, evaluation, and authorization of chemicals) "requires immediate and ongoing action from vehicle manufacturers and suppliers," and potentially "poses a threat to business continuity" for noncompliant companies, the

association said. ACEA also said the guidance could assist carmakers in complying with the European Union's CLP Regulation (classification, labeling, and packaging of substances, Regulation (EC) No. 1272/2008), and included details on the enforcement of REACH by authorities in EU countries.

The ACEA guidance was published jointly with a number of other industry groups, including the Japan Automobile Manufacturers' Association and the Korea Automobile Manufacturers' Association.

On hazardous substances in products, known under REACH as "articles," the guidance said notifications must be made to ECHA if the substance is present in a concentration of 0.1 percent weight by weight, and that this obligation "refers to the article and not at the level of the sub-component weight." The notification obligation applies to chemicals identified as "substances of very high concern" (SVHC) under REACH, meaning they are included on an ECHA "candidate list" for a potential ban.

In fact, the REACH law is unclear on whether the 0.1 percent threshold applies to complex articles, such as a car, or to component parts. ECHA published guidance in April saying that the threshold should apply to complex products, but conceded that this was not legally binding, and that not all EU countries agreed, possibly resulting in uneven enforcement. Since then, France has published a rule requiring article producers or importers to file SVHC notifications if the 0.1 percent threshold is exceeded at the component, rather than the whole product, level. The European Commission has said it is discussing the issue with France.

NORTH AMERICA

29. Obama Administration Abandons Stricter Ozone Air-Quality Rules

President Obama abandoned a contentious new air pollution rule, buoying business interests that had lobbied heavily against it, angering environmentalists who called the move a betrayal and unnerving his own top environmental regulators. The president rejected a proposed rule from the Environmental Protection Agency that would have significantly reduced emissions of smog-causing precursors, saying that it would impose too severe a burden on industry and local governments at a time of economic distress.

Business groups and Republicans in Congress had complained that meeting the new standard, which governs emissions of so-called ground-level ozone, would cost billions of dollars and hundreds of thousands of jobs. Republicans in Congress and on the campaign trail have harshly criticized a number of the administration's environmental and health regulations, which they say are depressing hiring and forcing the export of jobs.

The White House announcement came barely an hour after another weak jobs report from the Labor Department and in the midst of an intensifying political debate over the impact of federal regulations on job creation that is already a major focus of the presidential campaign.

The E.P.A., following the recommendation of its scientific advisers, had proposed lowering the so-called ozone standard of 75 parts per billion, set at the end of the Bush administration, to a stricter standard of 60 to 70 parts per billion. The change would have thrown hundreds of American counties out of compliance with the Clean Air Act and required a major enforcement effort by state and local officials, as well as new emissions controls at industries across the

country. Ozone, when combined with other compounds to form smog, contributes to a variety of ailments, including heart problems, asthma and other lung disorders.

The administration will try to follow the more lenient Bush administration standard set in 2008 until a scheduled reconsideration of acceptable pollution limits in 2013. Environmental advocates vowed on Friday to challenge that Bush standard in court, saying it is too weak to protect public health adequately.

Lisa P. Jackson, the E.P.A. administrator, has pushed hard for a tougher ozone standard, telling associates that it was one of the most important regulatory initiatives she would handle during her tenure. But she found herself on the losing end of a fight with top White House economic and political advisers, who were persuaded by industry arguments that the 2008 ozone rule was due to be reviewed in two years anyway and who were concerned about the impact on state, local and tribal governments that would bear much of the burden of compliance.

The impact would have been felt heavily in a band of Midwest and Great Plains states that are not themselves major sources of ozone pollution and that will be critical 2012 electoral battlegrounds.

In a statement, the president reiterated his commitment to environmental concerns, but added: "At the same time, I have continued to underscore the importance of reducing regulatory burdens and regulatory uncertainty, particularly as our economy continues to recover. With that in mind, and after careful consideration, I have requested that Administrator Jackson withdraw the draft Ozone National Ambient Air Quality Standards at this time." In words of reassurance directed at Ms. Jackson and the agency she heads, the president said that his commitment to the work of the agency was "unwavering." "And my administration will continue to vigorously oppose efforts to weaken E.P.A.'s authority under the Clean Air Act or dismantle the progress we have made," he said.

Ms. Jackson accepted the White House decision with a terse statement: "We will revisit the ozone standard, in compliance with the Clean Air Act."

Reaction from environmental advocates ranged from disappointment to fury, with several noting that in just the past month the administration had tentatively approved drilling in the Arctic, given an environmental green light to the 1,700-mile Keystone XL oil pipeline from Alberta, Canada, to Texas and opened 20 million more acres of the Gulf of Mexico to drilling.

30. US EPA Retains NAAQS Standards for CO

After a review of the relevant science, the US EPA affirmed the current national ambient air quality standards (NAAQS) for CO. EPA concluded that the current standards provide the required level of public health protection, including protection for people with heart disease, who are especially susceptible to health problems associated with exposures to CO in ambient air.

The existing primary standards for CO are 9ppm over 8 hours, and 35 ppm over 1 hour. There are no secondary (welfare-based) NAAQS for CO due to a lack of evidence of direct effects on public welfare at ambient concentrations. Currently, there are no areas designated as nonattainment for the CO standards. Ambient CO exposures have been falling over the recent decades in part due to the stringent emission standards implemented for motor vehicles.

As part of the rulemaking, EPA has strengthened the ambient air monitoring requirements for CO. The new requirements are expected to result in approximately 52 CO monitors operating near roads within 52 urban areas as part of the overall CO monitoring network.

The American Lung Association strongly criticized the weakness of the standards arguing that EPA missed the opportunity to strengthen this standard. "EPA did not accept the Agency's own evidence that the 1971 standards cannot protect public health, which is the sole purpose of the air quality standards", ALA noted in a statement. "Nor did the EPA follow the recommendation by independent expert scientists who advise them, the Clean Air Scientific Advisory Committee, to adopt stronger, more protective standards."

ALA noted that "large, repeated epidemiological studies provide evidence that the public is harmed by carbon monoxide at levels currently found in our nation. EPA noted multiple epidemiological studies that found links between CO exposure well below the existing standards, and harm to public health, including increased risk for hospital admissions for children with asthma and for adults with chronic obstructive pulmonary disease, as well as increased risk to people with cardiovascular disease."

31. Agreement Reached on 2017-2025 LDV GHG Emissions and CAFE Standards

President Obama issued a Presidential Memorandum on May 21, 2010 requesting that EPA and NHTSA, on behalf of the Department of Transportation, develop, through notice and comment rulemaking, a coordinated National Program under the Clean Air Act (CAA) and the Energy Policy and Conservation Act (EPCA), as amended by the Energy Independence and Security Act (EISA), to reduce fuel consumption by and greenhouse gas emissions of light-duty vehicles for model years 2017–2025.

EPA and NHTSA are developing the proposal based on extensive technical analyses, an examination of the factors required under the respective statutes and on discussions with individual motor vehicle manufacturers and other stakeholders. The National Program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles (light-duty vehicles) built in those model years. Together, these vehicle categories, which include passenger cars, sport utility vehicles, minivans, and pickup trucks, are responsible for approximately 60 percent of all U.S. transportation-related greenhouse gas emissions and fuel consumption. If ultimately adopted, these standards would represent a harmonized and consistent National Program pursuant to the separate statutory frameworks under which NHTSA and EPA operate. The approach is intended to allow manufacturers to build a single light-duty national fleet that would satisfy all requirements under both programs and would provide significant reductions in both greenhouse gas emissions and oil consumption.

EPA and NHTSA's current estimate is that the standards discussed would reduce greenhouse gases by approximately 2 billion metric tons and would save approximately 4 billion barrels of oil, over the lifetime of the model year 2017-2025 vehicles.

The agencies currently expect to issue a proposal for a coordinated National Program for model year 2017–2025 light-duty vehicles by September 28, 2011, and a final rule by July 31, 2012.

The agreement with thirteen major automakers to pursue the next phase in the Administration's national vehicle program is intended to increase fuel economy to 54.5 miles per gallon for cars and light-duty trucks by Model Year 2025. The President was joined by Ford, GM, Chrysler, BMW, Honda, Hyundai, Jaguar/Land Rover, Kia, Mazda, Mitsubishi, Nissan, Toyota and Volvo

– which together account for over 90% of all vehicles sold in the United States – as well as the United Auto Workers (UAW), and the State of California, who were integral to developing this agreement.

“This agreement on fuel standards represents the single most important step we’ve ever taken as a nation to reduce our dependence on foreign oil,” said President Obama. “Most of the companies here today were part of an agreement we reached two years ago to raise the fuel efficiency of their cars over the next five years. We’ve set an aggressive target and the companies are stepping up to the plate. By 2025, the average fuel economy of their vehicles will nearly double to almost 55 miles per gallon.”

Building on the agreement for Model Years 2012-2016 vehicles, which will raise fuel efficiency to 35.5 mpg, the next round of standards will require performance equivalent to 54.5 mpg or 163 grams/ mile of CO₂ for cars and light-duty trucks by Model Year 2025. Achieving the goals of this agreement will rely on innovative technologies and manufacturing.

These programs, combined with the model year 2011 light truck standard, represent the first meaningful update to fuel efficiency standards in three decades and span Model Years 2011 to 2025. Together, they will save American families \$1.7 trillion dollars in fuel costs, and by 2025 result in an average fuel savings of over \$8,000 per vehicle. Additionally, these programs will dramatically cut oil consumption, saving a total of 12 billion barrels of oil, and by 2025 reduce oil consumption by 2.2 million barrels a day – as much as half of the oil we import from OPEC every day.

The standards also curb carbon pollution, cutting more than 6 billion metric tons of greenhouse gas over the life of the program – more than the amount of carbon dioxide emitted by the United States last year.

The Environmental Protection Agency (EPA) and the Department of Transportation (DOT) have worked closely with auto manufacturers, the state of California, environmental groups, and other stakeholders for several months to ensure these standards are achievable, cost-effective and preserve consumer choice. The program would increase the stringency of standards for passenger cars by an average of five percent each year. The stringency of standards for pickups and other light-duty trucks would increase an average of 3.5 percent annually for the first five model years and an average of five percent annually for the last four model years of the program, to account for the unique challenges associated with this class of vehicles. The heaviest of light trucks will have a more relaxed requirement.

California plans on adopting its proposed rule in the same time frame as the federal proposal.

Given the long time frame at issue in setting standards for MY2022-2025 light-duty vehicles, EPA and NHTSA intend to propose a comprehensive mid-term evaluation. Consistent with the agencies’ commitment to maintaining a single national framework for vehicle GHG and fuel economy regulation, the agencies will conduct the mid-term evaluation in close coordination with California.

In achieving the level of standards described above for the 2017-2025 program, the agencies expect automakers’ use of advanced technologies to be an important element of transforming the vehicle fleet. The agencies are considering a number of incentive programs to encourage early adoption and introduction into the marketplace of advanced technologies that represent “game changing” performance improvements, including:

- Incentives for electric vehicles, plug-in hybrid electric vehicles, and fuel cells vehicles;
- Incentives for advanced technology packages for large pickups, such as hybridization and other performance-based strategies;
- Credits for technologies with potential to achieve real-world CO2 reductions and fuel economy improvements that are not captured by the standards test procedures.

In addition, EPA plans to propose provisions for:

- Credits for improvements in air conditioning (A/C) systems, both for efficiency improvements and for use of alternative, lower global warming potential refrigerant;
- Treatment of compressed natural gas (CNG);
- Continued credit banking and trading, including a one-time carry-forward of unused MY 2010-2016 credits through MY 2021.

32. US Government Urges Court to Uphold GHG Finding

US government lawyers have defended federal regulators' finding that greenhouse gas (GHG) emissions endanger public health, calling the scientific and legal support for the decision "overwhelming" and urging a court to reject industry and state lawsuits against it. The Department of Justice, on behalf of the Environmental Protection Agency (EPA), told the DC Circuit Court of Appeals that the lawsuits largely rely on "scattershot challenges" that "amount to little more than mistaken or essentially irrelevant characterizations of isolated parts of an abundant and convincing technical record.

"In fact, most of the key components of EPA's scientific analysis are essentially undisputed," Justice Department lawyers said in written arguments filed with the court.

Dozens of parties, including coal producers, industry groups, the state of Texas and conservative think tanks, are suing EPA to overturn the endangerment finding issued in late 2009, which said GHG emissions from automobiles were a threat to public health and welfare. The finding led to EPA issuing its tailoring rule including GHG emissions in Clean Air Act permits for major stationary sources, which is the target of another case before the DC Circuit.

One of the plaintiffs' key arguments against the finding is that EPA administrator Lisa Jackson improperly relied on several assessments by outside groups, including the UN's Intergovernmental Panel on Climate Change (IPCC). They also seek to undermine the IPCC assessment by bringing up the "Climategate" controversy in which e-mails from scientists at the University of East Anglia in the UK were hacked and posted online. The industry groups and states say the e-mails show scientists have manipulated data.

But the government brief points to previous lawsuits in which courts have upheld the use of studies by outside groups as the basis for major agency decisions. And they note that the IPCC's and other assessments used by EPA provide the most up-to-date information and have been "rigorously reviewed" not only by experts in the field but by US government agencies and scientists. Also, the scientists implicated in the controversy have been cleared "by multiple independent bodies" in the US and UK, government lawyers said.

EPA also defended its decision to classify the six main GHGs as a single "air pollutant" as supported by the Clean Air Act and regulatory precedent. It also dismissed the industry claim

that the agency should have considered the impacts of eventual regulation of stationary sources. “Stationary source issues are nowhere even mentioned” in the part of the Clean Air Act dealing with automobile emissions, the government said in its brief.

33. White House Announces Oil Savings Standards for Heavy Duty Trucks, Buses

On August 9th, the Obama administration announced final rules setting the first greenhouse gas emissions and fuel economy standards for medium- and heavy-duty pickup trucks, delivery vehicles, and tractor trailers. The final rules, which are supported by the trucking industry, set standards for model years 2014 through 2018 and will require manufacturers to improve fuel economy and greenhouse gas emissions by up to 20 percent for some models by 2018.

The rules are expected to save 530 million barrels of oil and prevent 270 million metric tons of carbon dioxide emissions, according to the administration.

Heavy-duty vehicles account for 6 percent of national greenhouse gas emissions, according to the administration. Transportation accounts for about 77 percent of domestic oil consumption with heavy-duty vehicles accounting for 17 percent of transportation oil use.

The rules issued jointly by the National Highway Traffic Safety Administration and the Environmental Protection Agency include:

- The rules will require tractor trailers to improve fuel economy and greenhouse gas emissions by 20 percent from current levels by 2018. That will save up to 4 gallons of fuel for every 100 miles traveled.
- The rule does not set separate standards for the tractor trailers themselves. However, EPA and NHTSA said they could be included in regulations beyond model year 2018.
- For heavy-duty pickup trucks and vans, the final rules require them to improve fuel consumption and greenhouse gas emissions by 15 percent by 2018 with separate standards for diesel and gasoline engines. That will save an estimated 1 gallon of fuel per 100 miles traveled, according to the administration.
- For delivery trucks, buses, and garbage trucks, known as “vocational vehicles,” the final rules require them to improve fuel economy and greenhouse gas emissions by 10 percent by 2018. That will translate to approximately 1 gallon of fuel saved for every 100 miles traveled.

Senior administration officials said the standards are set as greenhouse gas and fuel consumption reduction requirements rather than a miles-per-gallon standard because of the variability of the vehicles, their use, and their cargo.

Complying with the fuel economy and greenhouse gas emissions improvements will cost the trucking industry an estimated \$8 billion, according to EPA and NHTSA. Vehicle owners are expected to save \$50 billion in fuel costs over the life of the program.

Truck manufacturers will have some flexibility in how they meet the fuel economy and greenhouse gas emissions standards.

The fuel economy improvements, which are administered by NHTSA, will be voluntary for the first two model years. However, the greenhouse gas emissions reductions, administered by EPA, will be mandatory. The final rules exclude small businesses from both the greenhouse gas and fuel economy requirements.

Tractor trailer and vocational vehicle manufacturers will receive credits if they achieve fuel economy and greenhouse gas improvements beyond what is required by the rules. They will also receive credits for early deployment of new, more efficient technologies. Those credits can be used to offset higher emissions or fuel economy from other vehicles in their fleet or be sold to other manufacturers.

EPA and NHTSA relaxed some of the restrictions on trading credits in response to comments on the proposed rule. As proposed, the rule would have limited credit trading only to similar vehicles meeting the same standard. Instead, the final rules will allow credits to be traded between vehicles of the same weight class. Weight classes include light heavy-duty vehicles, (Classes 2b-5); medium heavy-duty vehicles (Classes 6-7); and heavy heavy-duty.

Manufacturers of heavy-duty trucks and vans will also have a fleetwide averaging system similar to that used by passenger vehicle manufacturers to meet their fuel economy requirements.

In addition to the CO₂ standards, EPA has adopted standards for N₂O and CH₄ emissions. The EPA has also adopted an HFC refrigerant leakage standard from air conditioning systems.

The standards for combination tractors and vocational vehicles include both engine and vehicle-based CO₂ and fuel consumption limits. Compliance with the engine emission limits will be determined through engine dynamometer testing, while compliance with vehicle-based standards will typically be determined based on a customized vehicle simulation model, called the Greenhouse gas Emission Model (GEM), developed by EPA specifically for this regulation. Instead of using a chassis dynamometer as an indirect way to evaluate real-world operation and performance, various characteristics of the vehicle are used as inputs to the model, such as aerodynamic features, weight reductions, tire rolling resistance, the presence of idle-reducing technology, and vehicle speed limiters.

The development of the program was conducted in cooperation with Environment Canada, who conducted truck emission testing at their facilities, under the Canada-US Air Quality Committee. Environment Canada is expected to adopt harmonized fuel economy and GHG emission standards for trucks. (See story below) The Canadian proposal is expected in early 2012, according to a consultation document published by Environment Canada.

The EPA and NHTSA said they are considering a next phase of rules for this sector, as there are more opportunities to reduce GHG emissions and fuel use from the heavy-duty fleet for model years beyond 2018. The goals would include spurring innovation as well as updating the assessment of actual emissions and fuel use from this sector. Such future regulation would also be designed to align with similar programs developed outside the United States.

34. Canada Consults on Heavy-Duty Vehicle Emissions Regulations

On August 9th, Canadian Environment Minister Peter Kent unveiled public consultations on the development of proposed regulations to limit greenhouse gas emissions from new on-road, heavy-duty vehicles. The consultations will focus on a paper that outlines the context for proposed regulations which will be published later in draft form for further comment in the

Canada Gazette, Part I, Kent said in a statement. Proposed regulations are targeted for publication in Canada Gazette, Part I, early in 2012 for a 60-day comment period, the statement said.

The proposed regulations would seek to reduce emissions and improve the fuel efficiency of the whole range of new on-road heavy-duty vehicles from full-size pickup trucks to tractor-trailers, and include a wide variety of commercial vehicles such as freight, delivery, service, cement, garbage, and dump trucks, as well as buses.

Canada announced in May 2010 it intended to align its regulations for heavy-duty vehicle emissions with U.S. standards, and implement regulations beginning with the 2014 model year. The public consultations were announced the same day the U.S. administration announced final rules setting the first greenhouse gas emissions and fuel economy standards for medium- and heavy-duty pickup trucks, delivery vehicles, and tractor trailers. The U.S. rules set standards for model years 2014 through 2018 and will require manufacturers to improve fuel economy and greenhouse gas emissions by up to 20 percent for some models by 2018.

The proposed Canadian regulations also would seek to promote the implementation of advanced technology vehicles such as hybrid and electric vehicles, the statement said. Reducing emissions in the transportation sector is a key component in the government's plan to reduce total greenhouse gas emissions by 17 percent from 2005 levels by 2020, it said.

In addition to the proposed heavy-duty vehicle regulations, the government has also finalized regulations to reduce greenhouse gas emissions from passenger vehicles and mandated a requirement for an average of 5 percent renewable fuel content in gasoline, and 2 percent content for diesel and heating oil, the statement said.

35. Battle Brews Over Auto GHG Standard Credit To Meet California ZEV Rule

A battle is brewing over California regulators' potential plans to allow over-compliance with forthcoming federal fuel economy and greenhouse gas (GHG) emission standards for 2017-2025 vehicles to count toward compliance with the state's strict proposed zero-emission vehicle (ZEV) sales mandate, according to sources, with environmentalists gearing up to staunchly oppose.

Automakers say they remain in the dark about details of the possible plans despite making their own recent proposals to California Air Resources Board (CARB) officials, but environmentalists are deeply concerned that new compliance flexibility measures being considered could sabotage the state's ZEV regulation by allowing, for example, too much credit for hybrid and other non-ZEVs.

CARB officials say the issue is still being discussed by state and federal staff for potential inclusion in the harmonized state and federal GHG emission standards for 2017-2025 vehicles, which are scheduled to be proposed in late October. The new ZEV rule and a third phase of the state's low emission vehicle regulation for non-GHG pollutants will be included in California's portion of the harmonized proposal in October.

Plans for harmonized rules setting one national standard for GHGs and fuel economy for 2017-2025 vehicles follow a landmark pact reached in 2009 for model-year 2012-2016 vehicles. CARB plans to finalize its rules in mid-December, while EPA and the National Highway Traffic

Safety Administration are not scheduled to finalize the federal portion of the regulations until July 2012.

Last November, CARB unveiled plans to revamp its ZEV regulation, which generally requires automakers to ramp up production and sales of battery-electric vehicles and hydrogen fuel-cell vehicles over the next decade and beyond. Under the new plan, CARB staff is proposing to significantly tighten requirements in 2018 and beyond, with automakers required to sell tens of thousands of “transitional zero emission vehicles” (TZEVs) and ZEVs. CARB cited a pressing need to consider the state’s goal of reducing total statewide GHG emissions 80 percent by 2050 in its proposed revisions to the ZEV regulation.

TZEVs, a new category proposed under the regulatory overhaul, are defined as vehicles using electricity -- such as plug-in hybrid electric vehicles -- or hydrogen, and meeting the state’s current super ultra-low emission vehicle levels. These vehicles would also be required to meet a new 15-year/150,000-mile emissions warranty and a 10-year/150,000-mile battery warranty, according to CARB’s plan. Pure ZEVs are defined as full battery-electric vehicles (BEVs) and hydrogen fuel-cell vehicles.

CARB staff forecasts, for example, that by 2025 about 13 percent of annual new vehicle sales in California -- or more than 200,000 vehicles -- will be a combination of fuel-cell vehicles, BEVs, and TZEVs.

Auto industry representatives are highly concerned that California’s ZEV mandate -- and the expectation that about 10 other states will also adopt California’s ZEV requirements -- will be very difficult to comply with unless CARB allows additional flexibility so that over-compliance with the national GHG standards can generate credits under the ZEV rule, according to an industry source.

In addition, while auto companies can receive credit under CARB’s ZEV regulation for sales of vehicles in states that have also adopted the ZEV rules, there are currently prohibitions on extra credit for sales of similar vehicles in states that have not adopted the ZEV rules. Auto industry representatives have proposed that federal and CARB officials lift that prohibition under the new GHG and ZEV standards.

Auto industry representatives say it is reasonable for CARB and federal officials to expand credit generation opportunities because the ZEV program’s principal goal is to expand sales of advanced technologies with low or no emissions.

In a July 28 letter to federal officials outlining its commitments under the forthcoming harmonized fuel economy and GHG standards for 2017-2025 vehicles, CARB committed to “propose that its revised ZEV program for the 2018-2021 MYs include a provision providing that over-compliance with the federal GHG standards in the prior model year may be used to reduce in part a manufacturer’s ZEV obligation in the next model year.”

However, a CARB spokesman says that “we are still working out how or if this will really work, so we don’t have any further details to share at this time.” Further, “staff will make a decision on” providing compliance flexibility “based on the facts,” the spokesman says. “They are committed to make a fair decision based on that. Until then we should allow them the room to consider all the issues.”

Automakers are concerned about the exact proposal, if any, that will be included in the rules scheduled for release in late October. "We're not sure how all that would work and how much flexibility it really will provide". "And like everyone else, we're waiting to see the actual proposal."

Environmentalists closely following the rulemakings say they are very concerned about the possible proposal to provide more compliance flexibility, signaling a potential contentious debate as CARB attempts to finalize the rules in mid-December.

Essentially, environmentalists fear automakers will be able to generate significant amounts of credit under the national GHG standard by selling non-ZEVs such as hybrid vehicles, which then will be used to help satisfy the ZEV regulation. This would defeat the ZEV rule's primary purpose of being a driving force for ensuring electrification and EV commercialization in this decade.

36. Ontario to Expand Electric Vehicle Charging Network

The Ontario government will commit C\$80 million (U.S. \$81 million) to promoting the development of electric vehicle charging station infrastructure, the Canadian province's premier, Dalton McGuinty, said on August 9th. The provincial agency Infrastructure Ontario will encourage the public and private sectors to submit proposals to build, test, and expand recharging facilities, and the government funds will provide seed money for the projects selected, McGuinty said in a statement. Conveniently located charging infrastructure will encourage more electric vehicles on the roads, building on the province's existing cash incentive of up to C\$8,500 for purchases of electric automobiles, he said. The province is aiming to have 5 percent of all registered automobiles be electrically powered by 2020, he said.

37. Toyota to Build Electric SUV in Canada

Toyota Motor Co will build its first electric vehicle produced outside Japan in the Canadian province of Ontario as part of a multimillion-dollar public-private project announced in July. The automaker will build the vehicle -- an electric version of the RAV4 SUV -- at its plant in Woodstock, Ontario, the Canadian government said in a recent release.

Toyota plans to invest as much as C\$545 million (\$558 million) in the overall project. Known as Operation Green Light, the plan includes upgrades at other Toyota plants in Ontario, the country's industrial heartland. The Canadian government will chip in C\$70.84 million toward C\$506 million-worth of Operation Green Light, with Ontario providing another C\$70.84 million toward the project's C\$545 million total.

The RAV4 venture is a joint project with Tesla Motors Inc. The compact crossover electric vehicles (EV) will be built on the same line as the gasoline-powered RAV4 at the Woodstock plant, about 135 km (84 miles) southwest of Toronto.

Toyota will pay Tesla around \$100 million to supply the electric powertrain, which includes the battery, motor, gearbox and power electronics for the RAV4 EV. The electric powertrains will be built at Tesla's production facility in Palo Alto, California, and then shipped to Woodstock for final assembly in the vehicle.

Toyota said details on U.S. pricing and distribution of the electric RAV4 would be announced later. A decision about sales in Canada has not yet been made.

38. U.S. Carbon Emissions Jumped Nearly 4 Percent In 2010

U.S. emissions of the main greenhouse gas rebounded nearly 4 percent last year as factories ran harder while the economy recovered and as consumers boost air conditioning during the hot summer, the government has announced. U.S. carbon dioxide emissions from the burning of oil, coal and natural gas, which accounts for about 80 percent of U.S. overall greenhouse gas output, rose 213 million tons, or 3.9 percent, last year. It was the first rise in the emissions blamed for global warming since the recession pushed them down in the previous two years and the largest increase since 1988.

"In 2010 manufacturing industries showed a strong recovery from the 2008-9 recession and energy-intensive manufacturing experienced high growth as well," which contributed to the rise, the EIA said in an annual report. The emissions boost in 2010 "likely does not signal a new trend in emissions growth," as the total amount emitted was below levels hit in 2007 and 2005, the EIA said. In fact, the United States has made some progress on reducing emissions as many utilities have been switching to burning natural gas, which releases less CO₂ than coal. In addition, U.S. CO₂ emissions from vehicles could ease in coming years as the Obama administration has already passed efficiency standards and is intending making them tougher.

Still, last year's rise shows that U.S. emissions are now mostly dictated by changes in the economy. Without a comprehensive energy policy, President Barack Obama's goal of reducing greenhouse gas emissions about 17 percent by 2020 from the 2005 levels remains a challenge.

39. U.S. Sees Growing Losses From Extreme Weather

The United States has already tied its yearly record for billion-dollar weather disasters and the cumulative tab from floods, tornadoes and heat waves has hit \$35 billion, the National Weather Service has announced. And it's only August, with the bulk of the hurricane season still ahead.

"I don't think it takes a wizard to predict 2011 is likely to go down as one of the more extreme years for weather in history," National Weather Service Director Jack Hayes told journalists on a conference call.

The agency's parent organization, the National Oceanic and Atmospheric Administration or NOAA, launched a campaign on Wednesday to better prepare Americans for violent weather. There have so far been nine separate disasters this year that caused an economic loss of \$1 billion or more in the United States, tying the record set in 2008, NOAA said. The most recent was the summer flooding along the Missouri and Souris rivers in the upper Midwest. (The report was released prior to the damage caused by hurricane Irene in late August.)

The "new reality" is that both the frequency and the cost of extreme weather are rising, making the nation more economically vulnerable and putting more lives and livelihoods at risk, Hayes said. The number of U.S. natural disasters has tripled in the last 20 years and 2010 was a record breaker with about 250, according to property and casualty reinsurer Munich Reinsurance America.

Average thunderstorm losses have increased five-fold since 1980. For the first half of 2011 there have been \$20 billion in thunderstorm losses, up from the previous three-year average of \$10 billion, NOAA said.

The rising costs are due partly to demographics, Hayes said. The population is rising and there are more people and more buildings in environmentally vulnerable areas, such as coastal regions. Asked if global warming was to blame for the rising frequency of wild weather, Hayes said that was "a research question" and that it would be difficult to link any one severe season to overall climate change.

40. DOE Fracking Panel Presents First-Round Recommendations

On August 11th, the Department of Energy's advisory panel on hydraulic fracturing issued its first round of recommendations, calling for more disclosure of the chemicals in fracking fluids and tighter monitoring -- but shying away from a determination that the natural gas extraction practice poses a significant risk to drinking water. That's good news for the natural gas industry, which is anxious to alleviate public concerns about fracking that threaten the development of abundant shale gas supplies. It could also ease power sector concerns about the availability of gas as utilities consider fuel switching away from coal to meet new Clean Air Act greenhouse gas and toxics standards.

The report does call for quick action to reduce air emissions and suggests an interagency effort to assess the "overall greenhouse gas footprint" from shale gas production. "Measures should be taken to reduce emissions of air pollutants, ozone precursors, and methane as quickly as practicable," the report says. "The Subcommittee supports adoption of rigorous standards for new and existing sources of methane, air toxics, ozone precursors and other air pollutants from shale gas operations."

However, the report doesn't spell out a greater federal regulatory role in reducing these emissions. Instead, it recommends, "Encouraging shale-gas production companies and regulators to expand immediately efforts to reduce air emissions using proven technologies and practices."

The DOE panel includes Environmental Defense Fund president Fred Krupp and Clinton administration environment and energy officials Kathleen McGinty and Susan Tierney.

Panelists characterized the report as a balanced approach to addressing concerns over fracking -- and their work falls in line with the Obama administration's desire to see shale gas production continue to grow while mitigating relatively simple environmental impacts. The report is the first of two the advisory panel will issue; the second is due in 90 days.

41. US EPA to Oversee the Use of Diesel in Fracking

U.S. lawmakers pressed the Environmental Protection Agency on Monday to adopt a broad definition of diesel for its upcoming guidance on use of the fuel in a natural gas drilling practice that critics say can taint water supplies.

The EPA is developing a framework to oversee the use of diesel in hydraulic fracturing, the only area where the practice is subject to federal oversight under the Safe Drinking Water Act.

A narrow definition of diesel fuel could provide drillers with a loophole that would allow them to use some forms of diesel containing toxic chemicals without obtaining a permit, the lawmakers warned in a letter.

"We urge you to craft a definition that provides consistency to industry while serving to protect public health and the environment," said the letter, signed by House Democrats Henry Waxman, Edward Markey, Diana DeGette and Rush Holt.

Waxman, the top Democrat on the House Energy and Commerce Committee, along with Markey and DeGette sponsored a probe that found 12 oil services firms, including Halliburton and BJ Services, injected millions of gallons of fluids containing the fuel into wells between 2005 and 2009.

Hydraulic fracturing, or fracking, injects a mixture of water, sand and chemicals into rock formations at high pressure to force out oil and natural gas.

Innovations in the decades-old practice have allowed drillers to tap vast shale gas reserves that previously were out of reach.

But the spread of the technique to new areas has prompted a backlash from homeowners near shale gas developments who complain the practice has contaminated their drinking water.

Drillers say fracking is safe, noting that it is carried out thousands of feet (meters) below ground, much deeper than most water sources.

Seeking to allay public concerns, the Obama administration set up a panel to weigh in on what immediate steps are needed to improve the public and environmental safety of fracking. That panel's initial report is due this week.

42. Los Angeles and Long Beach Ports Settle Emissions Lawsuit

Attorney General Kamala D. Harris today announced a settlement with cargo terminals at the ports of Long Beach and Los Angeles over diesel emissions from exhaust that requires the terminals to complete projects to reduce their diesel emissions and better notify the public of emissions. Attorney General Harris filed suit in June alleging the terminals violated Proposition 65, by exposing thousands of neighboring residents to high levels of diesel exhaust without giving the required warning.

"This settlement will speed the requirements for port terminals to reduce diesel emissions," said Attorney General Harris. "This is vitally important because expanding port traffic leads nearby residents to be exposed to polluted air, and increased risk of cancer and other diseases."

Approved today in Los Angeles Superior Court, the settlement requires the terminals to: implement an innovative warning program using newspaper ads, bus shelter signs and the Internet to inform the community about the diesel exposures; undertake projects valued at \$1 million per terminal to reduce diesel emissions from their respective operations; and pay monies to the ports of Long Beach and Los Angeles for projects to lower diesel emissions from the trucks, tractors and trains that operate at the port.

The \$1 million projects to be undertaken at the seven terminals include pilot projects to test solar electric panels that withstand the salt water environment and a crane mounted system to capture exhaust from idling vessels. The terminals will also pay \$756,000 to the Port of Los Angeles for grants to allow small trucking firms to buy new, low-emission trucks; \$324,000 to the Port of Long Beach for projects for clean running trucks and locomotives; and \$540,000 in civil penalties.

In addition, the terminal operators will have to warn the public that they are being exposed to diesel exhaust, as required by Proposition 65. The settlement requires the terminal operators to keep giving the warnings - at bus stops, in newspapers and on the Internet - until diesel emissions no longer pose a significant risk to the community.

The seven terminals at the Ports of Long Beach and Los Angeles that cause the largest diesel exposures to the surrounding neighborhoods are: APM Terminals Pacific, Ltd.; Eagle Marine Services, Ltd.; International Transportation Service, Inc.; SSA Terminal (Long Beach) LLC; SSA Terminals, LLC, Pacific Maritime Services, L.L.C.; Trapac, Inc.; West Basin Container Terminal LLC; Yusen Terminals, Inc.

In February, Attorney General Harris filed a friend-of-the-court brief in a Ninth Circuit Court of Appeals case in support of efforts by the Port of Los Angeles to reduce air pollution through its Clean Trucks program.

43. US DOE Awards \$175 Million for Advanced Vehicle Research

U.S. Energy Secretary Steven Chu has announced more than \$175 million over the next three to five years to accelerate the development and deployment of advanced vehicle technologies. The funding will support 40 projects across 15 states and will help improve the fuel efficiency of next generation vehicles. The projects will target new innovations throughout the vehicle, including better fuels and lubricants, lighter weight materials, longer-lasting and cheaper electric vehicle batteries and components, more efficient engine technologies, and more. This comprehensive approach to vehicle efficiency research and development will help ensure the technologies are available to help automakers achieve recently announced fuel efficiency standards.

In July, the President announced fuel efficiency standards for cars and light trucks which will bring fuel efficiency to 54.5 miles per gallon by Model Year 2025 and which, combined with steps already taken by this administration, will save American families \$1.7 trillion at the pump and reduce oil consumption by 12 billion barrels by 2025. The Administration also announced fuel-efficiency standards for work trucks, buses and other heavy-duty vehicles, which will save American businesses that operate and own these commercial vehicles approximately \$50 billion in fuel costs over the life of the program.

"The Department of Energy is investing in new advanced technologies that will significantly improve vehicle fuel economy, save consumers money, and create skilled jobs for Americans," said Secretary Chu. "Investments in the next generation of autos will strengthen our economy and lead to a more fuel-efficient, clean energy future."

The funds will leverage additional investments by the grantees to support projects totaling more than \$300 million. The selections focus on eight approaches to improving vehicle efficiency:

- Advanced fuels and lubricants: Eight projects awarded to improve fuels and lubricants that will enable optimal performance of advanced combustion engines.
- Light-weighting materials: Five projects awarded to accelerate commercial availability of lighter weight vehicles using advanced materials that dramatically reduce vehicle weight while maintaining the highest safety standards.

- Light weight multi-material prototype: Two projects awarded to design, build, and test a light-weight vehicle that is 50 percent lighter than a baseline light-duty vehicle. These projects are being undertaken as part of the Clean Energy Dialogue with Canada.
- Advanced cells and design technology for electric drive batteries: Twelve projects awarded to develop high energy or high power batteries for electric vehicles that should significantly exceed existing state-of-the-art technologies in terms of performance and/or cost.
- Advanced power electronics and electric motor technology: Four projects awarded to develop the next generation of power inverters and electric motors to meet demanding performance targets while achieving significant cost reductions.
- Thermoelectric and enabling engine technology: Three projects awarded to improve the efficiency of thermoelectric devices to convert engine waste heat to electricity. Selections of projects to develop early-stage enabling engine technologies to improve fuel efficiency and reduce emissions are expected in September.
- Fleet efficiency: Five projects awarded to develop and demonstrate fuel efficient tire and driver feedback technologies that will improve efficiency of the passenger car and commercial fleet.
- Advanced vehicle testing and evaluation: One project awarded to conduct laboratory and field evaluations of advanced technology vehicles and related infrastructure, while developing new or modified test procedures.

44. Canada Projects Large Rise in Greenhouse Gas Emissions from Oil Sands

Canada's latest Emissions Trends report projects that a large rise in greenhouse gas emissions from the development of oil sands, along with higher emissions from transportation, waste, and buildings, could lead to an overall emissions increase of about 7 percent by 2020 from 2005 levels. The new report on emissions trends projects that Canadian greenhouse gas emissions will total 785 million metric tons in 2020, higher than 731 million metric tons in 2005 and the 607 million metric ton level to which Canada committed in December 2009 under the Copenhagen Accord.

Emissions from oil sands are projected to rise by 62 million tons by 2020, negating declines in other parts of the oil and gas sector, according to the report, released July 29.

The report forecasts that emissions from Canada's oil and gas sector will rise by an overall figure of 46 million metric tons in the period 2005-2020 to a total of 199 million. Transportation sector emissions are expected rise by 16 million metric tons to 180 million, waste sector emissions to rise by 12 million metric tons to 66 million, and building sector emissions to rise 6 million metric tons to 86 million.

The electricity sector is the only one projected to decrease, by 31 million metric tons to a total of 95 million in 2020.

Within the oil and gas sector, greenhouse gas emissions from oil sands production are projected to increase by 62 million metric tons to a total of 92 million tons in 2020. Emissions

from conventional oil are projected to fall by 9 million metric tons to 22 million. Small decreases are predicted for petroleum refining and pipelines.

Environment Canada spokesman Mark Johnson told BNA Aug. 9 that declining emissions in such sectors as ground passenger transport and electricity production are in large part due to actions of the federal, provincial, and territorial governments and validate Canada's targeting of major emitting sectors, including oil sands.

The environmental group Pembina Institute said Aug. 5 that the growth in oil sands sector emissions effectively negates Canada's other efforts to reduce emissions. However, industry officials say oil sands development has become less emissions-intense over time and that energy companies will continue to make gains in emissions-intensity.

As for projections in the government report, Johnson noted that the estimates factor in only measures that have been announced with specific detail. "The government will move forward with additional measures that address emissions from other major sectors," he said.

The report noted that the projections are highly uncertain, particularly given the uncertainty of economic factors, and should be viewed as an "estimate within a set of possible emissions outcomes." Depending on global economic growth and world oil prices, the 785 million metric ton estimate for the country's overall emissions in 2020 could be low by as much as 55 million metric tons or high by as much as 38 million metric tons, it said.

The report noted that work is under way to further reduce emissions. For example, the forecast includes the impact of light-duty vehicle emission regulations for model years 2011-2016, but not the impact of a second phase of those regulations to begin in 2017 or heavy-duty vehicle regulations that are expected for the 2014 model year.

"Future emission reductions will continue to accumulate, thereby pushing projected emissions in 2020 down to the levels required to meet the 2020 target," it said.

The oil and gas industry expects oil sands production to double from 2010 levels by 2020, but that does not mean a doubling in emissions, Travis Davies, manager of media and issues with the Canadian Association of Petroleum Producers, told reporters. "Indeed, we've reduced our per-barrel GHG intensity by 29 percent since 1990 and will continue to do so over the time frame of this report. Our goal remains to drive oil sands GHG emissions to the same or better than the average conventional barrel."

The Pembina Institute environmental group said that the projected increase in emissions from the oil sands sector effectively negates Canada's other efforts to reduce greenhouse gas emissions. "The bottom line is that virtually the entire projected increase in Canada's emissions between 2005 and 2020 will come from the oil sands," Clare Demerse, the organization's climate change director, said in a statement. "For Canada's climate policy as a whole, the bottom line is really simple: we can't keep letting one sector's overheated growth steal the show. Climate policy has to be designed to meet Canada's greenhouse gas targets in the smartest and most efficient way possible—and that means all of us, oil sands included, have to do our share."

45. Industry Seeks To Block DOD's Review Of Oil Sands' GHG Emissions

Industry groups are seeking to block the Department of Defense (DOD) from conducting a planned National Environmental Policy Act (NEPA) analysis that will examine the lifecycle greenhouse gas (GHG) emissions from fuels containing Canadian oil sands and will be critical to determining DOD's final policy toward the purchase of such fuels.

In recent comments, the Center for North American Energy Security, which represents oil sands producers and other fuel producers, says NEPA does not allow DOD to consider GHG emissions or other lifecycle impacts from the fuel because the emissions do not occur as a result of DOD's purchases and would occur regardless of those purchases.

The move comes as Congress is weighing whether to repeal the legal requirement barring DOD and other agencies from purchasing oil sands and other high-carbon fuels and House lawmakers are increasingly attaching amendments to pending appropriations bills blocking DOD and other agencies from implementing such policies.

Meanwhile, a federal court recently threw out environmentalists' suit challenging DOD's interim fuel-purchase policy as inadequate. Environmentalists had alleged that DOD's interim fuel purchasing policy violated section 526 of the Energy Independence & Security Act (EISA) of 2007, which bars federal agencies from contracting to purchase alternative fuels that emit more GHGs than conventional oil.

DOD's interim policy on section 526 stated that its Defense Logistics Agency (DLA) Energy contracts for petroleum products were not governed by section 526, in part because the contracts in question do not prescribe procurement of an alternative or synthetic fuel, but rather are for procurement of refined petroleum products, not Canadian oil sands. The court, however, never reached these or other issues raised on the merits in *Sierra Club, et al. v. U.S. Defense Energy Support Center, et al.*, and instead rejected the case late last month because of activists' lack of standing.

While DOD has maintained it is in compliance with section 526, it reached an agreement with the Sierra Club to prepare the NEPA document for its final policy.

The notice cites the expected growth in the American petroleum market of fuels containing Canadian oil sands, referencing two pipelines approved by the State Department within the last three years, and one additional pipeline pending approval to deliver crude oil derived from Canadian oil sands to the United States. In addition, because various crude oils are commingled before processing, petroleum products derived from Canadian oil sands will be "indistinguishable" from other petroleum products, "thereby making it difficult for DLA Energy to exclude Canadian oil sands recovered crude refined petroleum from routine petroleum purchases," the notice says. As a result, DLA Energy will study whether current or future purchases of mobile fuels will have "environmental consequences," it says. The EA will "evaluate the potential environmental, human health, engineering and socioeconomic considerations, including a review of lifecycle greenhouse gas emissions, associated with DLA Energy's purchase of mobility fuels, including any fuels containing Canadian oil sands recovered crude, in light of Section 526 of the EISA," the notice says.

The EA "will aid DLA Energy in defining the effects of its current mobility fuels purchasing program, and determine whether a modification to this program would bring an improved environmental outcome without consequences to DLA Energy's mission to support the Warfighter with comprehensive Energy solutions in the most effective and efficient manner possible," it says. DLA Energy is also weighing whether to proceed to an environmental impact

statement (EIS) in lieu of an EA. EISs provide a more in-depth look at impacts from a federal agency action as compared to EAs.

Both the center and American Petroleum Institute (API), which filed comments July 28, argue that if DLA Energy conducts an EA, it should study the effects on GHG emissions in general if DLA Energy were to not purchase products with Canadian oil sands, but others did. If DLA Energy does not buy Canadian oil sands derived fuels and another entity purchases these oil sands crude, “there will be greater emissions of greenhouse gases due to the transport of those Canadian oil sands crudes for use in other locations in the world, such as China or India,” API says.

API also argues that DLA Energy should conduct a proper lifecycle GHG analysis that considers the latest production technology and applicable regulations in Alberta, Canada, “to determine if there is a meaningful difference in life-cycle emissions between petroleum products produced from Canadian oil sands, and petroleum products produced from crude oil sources in the United States and locations throughout the world.”

DLA Energy should also discuss the difficulty in segregating Canadian oil sands crudes from other crudes, and whether they are distinguishable “in terms of efficacy and emissions,” API says.

46. DOE Funds Fuel Cell Analyses

The Department of Energy (DOE) is funding a series of analyses on hydrogen fuel cells and vehicles to help guide the department's efforts to develop the clean energy devices to increase jobs, lower greenhouse gas emissions and keep the U.S. competitive in the global clean energy race, DOE recently announced. The announcement follows a recent uptick in DOE support for fuel cells and hydrogen-powered vehicles after Energy Secretary Steven Chu reversed a decision not to include the technology in the agency's first Quadrennial Technology Review (QTR) -- a first-of-its-kind review of energy R&D meant to guide a national energy policy.

“These projects will help advance our fuel cell and hydrogen storage research efforts and bring down the costs of producing and manufacturing next generation fuel cells,” Chu said in an August 9th statement. “These technologies are part of a broad portfolio that will create new American jobs, reduce carbon pollution, and increase our competitiveness in today's global clean energy economy.”

DOE is providing \$7 million for analysis from four separate projects. Directed Technologies, Inc., of Arlington, VA, will receive \$3 million for two cost analyses. One analysis will focus on transportation fuel cell systems and the other on hydrogen storage systems. Lawrence Berkeley National Laboratory based in Berkeley, CA, will receive \$1.9 million to develop total cost models for low- and high-temperature stationary fuel cell systems up to 250 kilowatts (kW). Battelle Memorial Institute in Columbus, OH, will receive up to \$2 million for cost assessments for stationary fuel cell applications up to 25 kW.

The projects will provide lifecycle cost analyses of both existing and conceptual fuel cell systems for transportation and stationary applications, according to DOE. “The projects will analyze a range of system sizes, manufacturing volumes, and applications, including transportation [vehicles], backup power and material-handling equipment such as forklifts.”

47. EIA Forecasts Decline for US Oil Demand This Year

Despite continued concerns over the pace of the global economic recovery, particularly in developed countries, the US Energy Information Administration expects worldwide oil consumption to increase this year and next spurred by demand in developing countries. US oil consumption, however, is forecast to contract from a year ago.

Worldwide oil demand, led by China, will increase by 1.4 million b/d in 2011 to average 88.19 million b/d and by 1.6 million b/d in 2012, outpacing average global demand growth of 1.3 million b/d from 1998-2007, before the onset of the global economic downturn, EIA said in its latest Short-Term Energy Outlook.

The forecast assumes global economic growth of 3.4% this year and 4.1% next year, but EIA says that these assumptions do not fully reflect recent economic and financial developments that point towards a weaker economic outlook.

EIA forecasts that commercial oil inventories among members of the Organization for Economic Cooperation and Development will decline in both 2011 and 2012. The number of days of supply will fall to 56 days in this year's fourth quarter and to 55 days in fourth-quarter 2012 from a relatively high 58 days during fourth-quarter 2010.

EIA expects oil markets to tighten as rising liquid fuels demand in emerging economies continues to outpace supply growth outside the Organization of Petroleum Exporting Countries, with continuing upward pressure on oil prices. EIA expects that West Texas Intermediate crude oil spot prices will average \$96/bbl in 2011 and \$101/bbl in 2012, up from an average of \$79/bbl in 2010. Meanwhile the US refiner oil acquisition cost is forecast to average \$100/bbl in 2011 and \$107/bbl in 2012, as global spare production capacity and inventories decline.

EIA projects that non-OPEC oil and liquid fuels production will increase by an average of 650,000 b/d in 2011 and 2012. The greatest increases in non-OPEC oil production during 2011 and 2012 will occur in Brazil, Canada, China, Columbia, Kazakhstan, and the US, with annual average growth in each country exceeding 100,000 b/d. At the same time, EIA expects production declines of 140,000 b/d this year in both Yemen, stemming from ongoing strife there, and in the North Sea region, particularly in the UK.

OPEC oil production will decline by about 250,000 b/d in 2011, in large part due to the supply disruption in Libya, EIA forecasts. This is unchanged from last month's outlook and assumes that about one half of Libya's pre-disruption production will resume by the end of next year, contributing to an overall increase in OPEC production of 500,000 b/d in 2012.

OPEC natural gas liquids production, which is not subject to production targets, is expected to increase by 520,000 b/d in 2011 and by 410,000 b/d in 2012.

EIA projects that OPEC's spare oil production capacity will decline to 3.5 million b/d at yearend, from 4 million b/d a year earlier, followed by a further decline to 3.3 million b/d by yearend 2012.

Annual US oil demand in 2011 will average 19.03 million b/d, a 150,000 b/d decline from last year, EIA forecasts. This is a reversal of the 30,000 b/d increase projected in last month's EIA outlook. Motor gasoline and distillate fuel each will account for about one-fourth of the change. **During 2010, US liquid fuels consumption climbed by 410,000 b/d, the highest rate of growth since 2004.**

EIA expects total US liquid fuels consumption to rebound and increase by 170,000 b/d to 19.2 million b/d in 2012, with motor gasoline consumption rising by 50,000 b/d and distillate fuel consumption increasing by 70,000 b/d, as economic growth improves and retail liquid fuels prices post only small increases from this year.

The annual average regular grade gasoline retail price will increase to \$3.53/gal in 2011 and to \$3.64/gal in 2012 from \$2.78/gal in 2010 due to higher oil prices, EIA forecasts.

US crude oil production, which climbed by 110,000 b/d in 2010 to 5.5 million b/d, will increase by 100,000 b/d this year and by 80,000 b/d in 2012, driven by output from increased oil directed drilling activity in unconventional shale formations, EIA forecasts.

Commercial oil inventory levels ended July at an estimated 354 million bbl, down by 3 million bbl from last year but still 21 million bbl higher than the previous 5-year average for that month, EIA reported.

Following the release of about 31 million bbl of oil from the US Strategic Petroleum Reserve, commercial oil stocks are expected to rise to about 369 million bbl by the end of September, about 40 million bbl higher than the previous 5-year average. EIA also forecasts that crude oil stocks gradually will be drawn down to near their 5-year averages by the end of 2012.

In contrast, refined product inventories have moved closer to their 5-year averages since the beginning of this year and are expected to remain so through next year, EIA said.

EIA expects US gas consumption to grow by 1.8% to 67.4 bcf/d in 2011, as industrial and electric power consumption growth make up most of the increase. US gas demand will increase slightly next year to 67.8 bcf/d, EIA forecasts, as growth by industrial and electric power users offsets projected declines in residential and commercial consumption due to anticipated warmer winter weather.

The outlook calls for US marketed gas production to average 65.5 bcf/d in 2011, up 5.9% from 2010. This growth is centered in the onshore production in the Lower-48 states, which more than offsets projected declines in the Gulf of Mexico. EIA expects production will continue to grow in 2012, but at a slower pace, increasing by 0.9% to average 66.1 bcf/d. EIA expects that the Henry Hub gas price will average \$4.24/MMBtu in 2011 and \$4.41/MMBtu in 2012, reflecting some tightening in supply as US production growth slows.

48. Inhofe Cites Environment in Perry Endorsement

Senate Environment & Public Works ranking member James Inhofe (R-OK) will endorse Rick Perry in the race for the Republican presidential nomination, saying the Texas governor is better on environmental issues than other GOP contenders. Inhofe said former Massachusetts Gov. Mitt Romney, in contrast, is "a little mushy" on the environment, the Tulsa World reported.

Inhofe is one of Congress' leading opponents of EPA's climate change program, while Perry has battled the agency over its greenhouse gas rules and various other regulations. Perry favors devolving more regulatory power to the states, a policy that Inhofe would be in a position to support if Republicans win the White House and Senate in next year's elections and the Oklahoman becomes chairman of the environment committee.

Unlike Perry, Romney once supported a cap-and-trade system to reduce greenhouse gas emissions, a position he has since abandoned. However, on August 24th, Romney told an audience in New Hampshire that he didn't know if humans were causing climate change and said he wasn't "willing to spend trillions of dollars on something I don't know the answer to," according to a Reuters dispatch. Politico noted that Romney in June said it was "important for us to reduce our emissions of pollutants and greenhouse gases." His campaign denied that Romney's position has changed, according to Politico.

49. U.S. Ethanol Exports To Surpass Brazil This Year

Weaker trade restrictions and high sugar prices should allow the United States to overtake Brazil in ethanol exports during the second half of 2011 according to the U.S. Energy Information Administration. During the first five months of 2011 U.S. ethanol exports more than doubled from the same period last year, the EIA said.

With U.S. corn-based ethanol relatively less expensive, U.S. ethanol producers have been able to supply markets that previously imported Brazilian ethanol. U.S. producers have also benefited from Brazil eliminating its 20 percent import duty through 2011 and lower European tariffs on ethanol blended with gasoline.

Looking past this year, U.S. state and federal policies may lead to more imports of Brazilian sugarcane ethanol, the EIA said. California's Low Carbon Fuel Standard would place a much lower carbon value on sugarcane ethanol than corn ethanol, providing refiners with an incentive to use more of the Brazilian fuel. The federal renewable fuel mandate also classifies sugarcane ethanol as an advanced biofuel. With production of cellulosic ethanol, another form of advanced biofuels, unlikely to meet the federal targets in the near future, Brazilian ethanol could fill that gap, the EIA said.

Another factor affecting U.S. ethanol trade will be the ability of the domestic market to consume higher blends of ethanol in gasoline. While the Environmental Protection Agency has increased the maximum blend rate in gasoline to 15 percent from 10 percent in vehicles built after 2000, logistical and legal hurdles have prevented widespread sales. The sale of E85, a blend with 85 percent ethanol and 15 percent gasoline, has also lagged due to a limited number of flex-fuel vehicles and a limited availability of E85 fueling pumps.

50. Toyota, Ford to Collaborate On Hybrid Trucks

Toyota Motor Corp and Ford Motor Co will work together to develop hybrid trucks and SUVs that will be ready for market by the end of the decade, the two companies have announced. Ford and Toyota plan to collaborate on product development for the future rear-wheel drive hybrid vehicles, as well as for telephone, Internet and entertainment systems. Developing the hybrids will help each automaker meet stringent U.S. fuel economy standards in coming years, said Takeshi Uchiyamada, vice president for Toyota research and development, and Derrick Kuzak, Ford's product development chief.

There are no plans for collaboration beyond rear-wheel drive hybrids and on-board phone, navigation and entertainment systems, Kuzak said.

Toyota has been the world leader in hybrids since it introduced the Prius sedan in 1997. It has since sold 3.3 million hybrid vehicles led by the Prius, which like most fuel-efficient cars, has front-wheel drive. While Toyota has led in hybrid sales, Ford has been a leader in pickup trucks,

which are predominately sold in the United States and Canada. Its F-series pickup trucks have been the best-selling vehicle in the U.S. market since the 1970s.

The tie-up also comes at a time when Toyota faces tougher competition in the United States, its most important market. It had risen to No. 2 in sales behind only General Motors Co in the U.S. market, but has since fallen behind Ford. Toyota's U.S. sales fell 7 percent in the U.S. market through July. Toyota has been struggling to restore sales momentum in the U.S. market after the March earthquake in Japan forced production disruptions. Ford's U.S. sales rose 12 percent in the first seven months of 2011.

By allying with Ford, Toyota is also taking aim at an area of vehicle technology where executives acknowledge that the Japanese automaker has lagged: on-board navigation and entertainment systems. Ford won sales and consideration from young car shoppers with its Sync system, an option that allows drivers to control stereos and cell phones with voice activated commands. The follow-up system, MyFord Touch, proved to be less popular with the high-end buyers Ford targeted.

51. Diesel Cars Gain Traction Slowly In US Market

Diesel auto sales in the United States have increased this year thanks to some temporary factors, including a shortage of hybrid cars because of disruptions from the Japanese earthquake disaster. US consumers bought an estimated 9,000 diesel cars in May, up 34 percent from a year earlier, according to the research firm Baum & Associates.

Some analysts say the long-term view is getting better as well for diesel, whose image has been tarnished by concerns about smelly cars and poor availability of diesel fuel outside the truck sector. Diesels have been available in the US for decades, but the market pales compared to Europe where they make up around half the auto fleet.

Alan Baum of Baum & Associates said that outside the large pickup truck segment, around one percent of US cars are diesels, and that total diesel market share is expected to be around 4.5 percent this year. By 2015, Baum expects diesel to grow to 6.0 to 6.5 percent, "with all of the growth in the smaller vehicles, meaning the one percent will grow to 2.5 or 3.0 percent."

The research firm JD Power & Associates sees the US diesel market share at 3.1 percent in 2011, and growing steadily to 7.4 percent by 2017.

Jeremy Anwyl, chief executive at the consultancy Edmunds.com, said prospects appear to be improving for diesel cars, which are cleaner and more efficient than in the past. Anwyl said consumers looking for better fuel efficiency are giving another look to diesels -- which typically get 20 to 30 percent better fuel economy than gasoline cars -- because of a tight supply of hybrids like the Toyota Prius.

"If you're looking for a Prius there aren't any around," he said. "The tight supply means prices have shot up and that makes alternatives more appealing." Still, he said diesels "are not cheap" and do better in the luxury segment where the cost difference is not as noticeable.

German carmaker Volkswagen is betting on diesel gaining in the US with its new plant opened in May in Tennessee, where around one in four cars produced is a diesel. The Mexican-made VW Jetta compact is the biggest-selling US diesel car with around 5,000 sold in May, according

to Baum. Other diesels are sold by Mercedes and BMW, along with a handful of large trucks from US makers.

US Transportation Secretary Ray LaHood said the improved fuel economy of diesel cars is a way to wean the US off imported petroleum. "If one-third of all vehicles in the USA were already clean diesel vehicles today, we would be saving 1.4 million barrels of oil every day," LaHood said at the VW plant opening. "That is equivalent to the amount of oil we currently import from Saudi Arabia."

Although efforts to introduce more diesels to the US have sputtered in the past, some things are different now, said Allen Schaeffer, executive director of the Diesel Technology Forum, a nonprofit group backed by industry. Schaeffer said diesels can now meet US emissions standards, even in states like California with more stringent regulations, thanks to technology improvement and new low-sulfur diesel fuel. In past years, some diesels could not be sold in California and a few other states.

One factor holding back diesel car sales is the cost of fuel. While it had been cheaper than gasoline in the past, it is now more costly, due to higher federal and state taxes and a smaller market for refiners. Schaeffer said the cost differential is bad energy policy and discourages diesel car sales.

52. Senate Deal Would Axe \$6 Billion Ethanol Tax Credit

Three senators recently reached a deal to repeal the \$6 billion per year ethanol tax credit by the end of July, an agreement that must still be passed by Congress. The loss of the subsidy could add extra costs for ethanol blenders such as Valero Energy Corp and Marathon Oil Corp, but it is unlikely to reduce demand for corn. "This agreement is the best chance to repeal the ethanol subsidy, and it's the best chance to achieve real deficit reduction," said Senator Dianne Feinstein from California, who made the deal with Senators John Thune from South Dakota, and Amy Klobuchar from Minnesota.

Government mandates require increasing amounts of the corn-based fuel until 2015. The ethanol industry uses some 40 percent of the U.S. corn crop to make the alternative motor fuel.

The deal would reduce the federal deficit this year by \$1.33 billion and direct \$668 million to extend tax breaks for technologies to help alternative motor fuels including biofuels get to market, Feinstein said.

The call on Capitol Hill to reduce tax breaks for ethanol and other industries has increased as President Barack Obama and Republicans in Congress search for ways to break the budget deadlock. Feinstein won a symbolic vote in the Senate, 73-27, on June 16th to end the payments on July 1st.

The path for the deal to become law is still uncertain. It could be attached to a stand-alone tax bill or become part of a wider measure to raise the federal debt limit. Klobuchar told reporters the proposal could be attached to a tax bill that starts in the House of Representatives or "more likely" be part of the debt ceiling agreement as part of a package of provisions to reduce U.S. debt over the long term. She said she hoped that repealing oil tax breaks, a goal of Obama's, could also be added to the package.

The trio of senators have asked Senate Majority Leader Harry Reid and Senate Minority Leader Mitch McConnell to help move the measure through Congress before the August break, and said they could not promise to support it after that deadline. If Congress fails to enact the proposal before the break, the deficit reduction and infrastructure tax breaks would no longer be possible, the senators said.

Thursday's deal focuses on ending the 45-cent per gallon blender's credit by the end of July. It would also kill the 54-cent per gallon tariff on ethanol by the end of the month, which is added mostly to imports from Brazil, where ethanol is made from sugarcane.

Ethanol producers and industry groups had supported a deal that would end the tax credit, but keep tax credits to support ethanol industry infrastructure, such as advanced pumps at gasoline stations that would allow drivers to select their own blends of ethanol.

Under the deal, tax credits for cellulosic ethanol, set to expire at the end of 2012, would be extended for three years, at a cost of \$308 million. Cellulosic is expected to be made in commercial amounts from non-food crops and agricultural waste, but first costs need to come down. In addition, tax credits for alternative fueling -- including electric charging stations for battery-powered cars and natural-gas filling stations -- would be extended through 2014, at a cost of \$253 million. Also a tax credit for small producers of biofuels would be extended for one year to the end of 2012, at a cost of \$107 million.

53. "Start-Stop" Seen Tripling In New Cars By 2016

Johnson Controls expects the number of vehicles built to allow "start-stop" technology will more than triple in five years as automakers worldwide seek better fuel efficiency. Already included in some vehicles, start-stop allows a car's engine to shut off when the vehicle is at rest, for instance, at a stop light. The engine restarts when the accelerator pedal is pressed. Shutting down the engine by this method can save 5 percent to 12 percent of fuel and polluting emissions in conventional gasoline-powered vehicles, Johnson Controls said.

Globally, start-stop will be used in 52 percent to 55 percent of new vehicles built in 2016, up from 8 percent in 2010, Johnson Controls told analysts. The U.S. auto parts supplier expects nearly 25 million vehicles will be built with the advanced batteries allowing start-stop in 2016, up from 7 million vehicles in 2011, executives said during an analyst meeting. JCI's power solutions president, Alex Molinaroli, said overall start-stop battery sales will be 35 million within five years, including batteries not put into new vehicles.

JCI executives told analysts the advanced batteries will yield three times the margin of more conventional lead-acid batteries.

The expansion of start-stop technology is driving demand for newer batteries, called absorbed glass mat.

The company told analysts that it expects the power solutions segment of its business to gain market share to 13.6 to 13.8 percent this year, up from 12.9 percent in 2010, and revenue of \$5.8 billion to \$6 billion, up from \$4.9 billion last year.

Demand for vehicles that already use start-stop, such as Toyota Motor Co.'s Prius and Ford Motor Co.'s hybrid models, has outpaced expectations in Europe in recent years.

The expansion of start-stop systems will likely delay the wide scale adoption of pure electric vehicles, because consumers can use a fuel-saving alternative without having to contend with different infrastructure, executives said.

54. EPA Rule Aims To Cut Smog, Soot from Coal Plants

U.S. environmental regulators have finalized a rule to cut air pollution from coal-fired power plants in 27 states east of the Rocky Mountains that result in unhealthy levels of smog and soot. The Environmental Protection Agency measure, known as the Cross State Air Pollution Rule, will add costs for some power generators, but should cut health care bills for Americans.

The EPA rule will reduce power plant sulfur dioxide emissions by 73 percent by 2014, from 2005 levels, when combined with state environmental laws. It will cut nitrogen oxide emissions by 54 percent by 2014. Those cuts are slightly deeper than ones proposed by the EPA last year.

Power plants have to start cutting their sulfur dioxide emissions in January 2012 and their nitrogen oxide emissions that May. In addition, the state of Texas will now be required to cut sulfur dioxide emissions in an annual program, a measure that was not included in last year's proposal.

The agency said the rule would prevent up to 34,000 premature deaths, and save \$280 billion per year in health costs. The pollution is linked to heart attacks and lung problems including asthma. Those benefits outweigh the \$800 million projected to be spent by power plants and others annually on the rule in 2014 and the roughly \$1.6 billion per year in capital investments already underway from previous rules, the EPA said.

The rule will also level the playing field for power plant operators that are already controlling these emissions by requiring more plants to take similar actions, it said.

The rule resulted from a federal appeals court order instructing the EPA to strengthen a similar regulation issued in 2005 by the Bush administration. It is opposed by many Republicans in Congress, who say it will kill jobs and could make transmission of electricity unreliable because it would force companies to shut some of their coal plants.

But the argument that the rule will hurt transmission is a "red herring" because plants integral to power delivery would not be allowed to shut down, said Susan Tierney, a managing principal at the Analysis Group, an organization of economic and financial consultants. She said only the oldest, least efficient and smaller coal plants would be shut as a result of rules to be issued this year by the EPA on power plants.

Environmentalists praised the EPA. The Clean Air Task Force said the rule was a "solid victory for clean air and public health."

The EPA will take public comment for 45 days on a supplemental rule that would require six states -- Iowa, Kansas, Michigan, Missouri, Oklahoma and Wisconsin -- to reduce nitrogen oxide pollution in the summer months. That rule is expected to be finalized late this year.

55. Caterpillar to Pay \$2.55 Million to Resolve Clean Air Act Violations

The U.S. Environmental Protection Agency (EPA) and the U.S. Department of Justice (DOJ) have announced a settlement with Caterpillar Inc. to resolve alleged Clean Air Act violations for

shipping more than 590,000 highway and non-road diesel engines without the correct emissions controls. Caterpillar also allegedly failed to comply with emission control reporting and engine-labeling requirements. Caterpillar will pay a \$2.55 million penalty, continue a recall of noncompliant engines and reduce excess emissions. Engines operating without proper emissions controls can emit excess nitrogen oxides (NOx), particulate matter and other air pollutants that impact people's health, potentially causing respiratory illnesses and aggravating asthma.

"The enforcement of vehicle emissions standards, labeling and reporting requirements is critical to protecting the air we breathe and ensuring that companies play by the rules," said Cynthia Giles, assistant administrator for EPA's Office of Enforcement and Compliance Assurance. "Today's settlement will protect public health and create a level playing field for companies that meet their environmental obligations."

"This settlement demonstrates our commitment to enforcing the Clean Air Act's requirement that engine manufacturers take steps to ensure engines are equipped with emissions controls that are essential to protecting public health from harmful air pollution," said Ignacia S. Moreno, assistant attorney general for the Environment and Natural Resources Division of the Department of Justice. "Caterpillar will pay a substantial civil penalty for shipping engines that did not comply with these Clean Air Act requirements, and under this settlement, it must continue its recall and correction of engines that do not have correctly configured emissions controls."

The Clean Air Act requires the use of certified after-treatment devices (ATDs) that control engine exhaust emissions once the emissions have exited the engine and entered the exhaust system. Typical ATDs include catalytic converters and diesel particulate filters. Correct fuel injector and fuel map settings are also crucial for proper engine emission control. Caterpillar allegedly shipped over 590,000 engines to vehicle assemblers without the correct ATDs and with improperly configured fuel injector and map settings. In some cases, the mis-configured engines were incorporated into vehicles which resulted in excess emissions of NOx and particulate matter into the environment.

The consent decree requires Caterpillar to continue its recall of non-compliant engines to install the correct ATDs and correct the fuel injector and fuel map settings. In addition to the recall, Caterpillar will mitigate the effects of the excess emissions from its engines through permanent retirement of banked emission credits. Caterpillar will also improve its reporting of emission control system defects, as required under the Clean Air Act.

The state of California, through the Air Resources Board, is also settling its claims for violations arising from the sale of improperly configured engines in California. California will receive \$510,000 of the civil penalty.

56. U.S. Government to Install Fuel Cells at 8 Military Posts

The Energy Department has announced that it will install 18 fuel cell backup power systems at eight U.S. military posts, as part of a partnership with the Defense Department to bolster energy security. "Projects like these fuel cell systems will help reduce fossil fuel use and improve energy reliability at military installations across the country," Energy Secretary Steven Chu said at the U.S. Army and Air Force Energy Forum.

Players from the Pentagon, industry, think tanks and Congress were discussing ways to help the military cut its appetite for fuel at the forum, outside Washington. The U.S. military used about \$13.2 billion of petroleum in military operations in 2010, Chu said.

He said alternative aviation fuels, biofuels and energy-efficient military vehicles could effectively reduce fuel consumption and the cost of transporting fuels to military personnel fighting wars in far-flung locations.

Diesel generators are widely used for backup power in military installations. Compared to generators or batteries, fuel cells are believed to require less maintenance, cut noise and emit fewer pollutants.

The fuel cell project will cost \$6.6 million, the Energy Department said. "The primary challenge facing currently available fuel cells is the higher cost of the units, compared to conventional technologies they replace," it said.

57. Exxon: Ruptured Pipeline Carried Tar Sands Crude

Exxon Mobil has admitted that a pipeline that failed recently, leaking oil into the Yellowstone River, routinely transported a heavier and more toxic form of crude than the company and federal regulators initially acknowledged. The Silvertip pipeline carries so-called tar sands crude from Alberta, Canada, as do the U.S. pipelines of most major oil companies, Exxon spokeswoman Karen Matusic told reporters. Matusic said the tar sands crude was present along various segments of the pipeline but not at the spill site in Montana.

"Oil from Canada was in the line, but not that area that was affected by the breach. The oil that spilled out, that oil came from Wyoming," she told reporters, referring to sweet crude produced in oil fields at the Montana-Wyoming border.

Tar sands oil or bitumen, derived from tar sands or oil sands, contains more toxic components than the sweet, or low sulfur, crude that Exxon and government regulators initially said flowed in the Silvertip. Almost all the oil reserves in Canada's Alberta province are found in oil sands, and Alberta accounts for more than 95 percent of Canada's total oil reserves.

The news comes amid an intensifying debate over TransCanada Corp.'s proposed \$7 billion pipeline to carry more than half a million barrels a day of tar sands crude from Alberta to U.S. refineries in the Midwest and the Texas Gulf Coast. Environmentalists and wildlife advocates are fighting the so-called Keystone XL pipeline, which would cut through six states from Montana to Texas and cross rivers like the Yellowstone, Platte and Missouri.

Citing a recent University of Nebraska study, activists say spills from pipes weakened by the corrosive and abrasive agents in tar sands crude would contaminate water supplies for hundreds of thousands of Americans and destroy bottomlands in the nation's midsection vital for endangered birds like the whooping crane.

The Obama administration is expected to make a decision later this year on the pipeline, which TransCanada said would create U.S. jobs and ensure a reliable source of oil as imports from other countries such as Venezuela and Mexico decline.

Environmental groups pointed to the July 1 rupture of the 69-mile Silvertip, which spilled what Exxon estimates at 42,000 gallons of oil, or 1,000 barrels, into the Yellowstone River west of Billings.

Officials with the U.S. Transportation Department's Pipeline and Hazardous Materials Safety Administration said they had just learned that the Silvertip carried oil from Canada. Federal inspectors were trying to determine if transport of the synthetic petroleum product could have triggered internal corrosion that may have played a role in the rupture.

Montana Governor Brian Schweitzer has faulted Exxon for failing to tell the state exactly what kinds of crude ran in the pipeline or spell out what hazardous chemicals were in the mix now contaminating riverside properties and sickening at least five residents. However, he underscored his support for the Keystone XL, which Exxon and other major oil companies are counting on. The pipeline "could help maintain and even increase oil production in Montana while bringing hundreds of new energy jobs and over \$1 billion in investment to Montana," Schweitzer said in a statement. Unlike the Silvertip, he added, the Keystone would be installed 25 feet below the riverbed and would feature an automatic shutdown in the event of a failure.

58. Canada to Keep Close Eye on Impact of Oil Sands Development on Air, Water

On July 21st, Canadian Environment Minister Peter Kent unveiled an environmental monitoring plan for the development of Alberta's oil sands that includes closer observation of water quality, air quality, and biodiversity. The plan, developed in cooperation with provincial, territorial, and academic scientists, will provide scientific evidence to dispel the misinformation that has been used to "discriminate" against oil sands products, Kent said at an Ottawa news conference. "It will provide the facts and the science to defend the product, which some abroad are threatening to boycott," he said.

The Canadian environmental plan includes water monitoring for pollutants including mercury, naphthenic acids, and polycyclic aromatic compounds (PACs). It does not specify which air pollutants will be monitored, as it remains to be determined which compounds, and at what levels, are being emitted from oil sands operations. Enhanced air quality monitoring is a crucial element of the overall plan, as airborne pollutants can impact distant areas, Environment Canada said July 21.

Implementation of the plan will cost about C\$50 million (U.S. \$53 million) per year, to be paid by industry, and will start "almost immediately" in cooperation with the provincial government in Alberta, Kent said. The plan, based on the 2010 recommendations of the Oil Sands Advisory Panel, will help governments and industry ensure sustainable development of the resource, he said.

On July 21st, Advisory panel chair Liz Dowdeswell said that the plan is "sound and robust," and builds on the framework and technical monitoring design for surface water quality monitoring of the Lower Athabasca River that the government released in March.

Industry is "broadly supportive" of improved monitoring of oil sands development, as long as governments jointly implement it in "as timely a fashion as possible," David Collyer, president of the Canadian Association of Petroleum Producers, told the press. "We're happy to be judged by sound science and balanced policy."

Phase II of the water quality component expands surface water quality monitoring beyond the Lower Athabasca River to include a larger downstream area and acid-sensitive lakes. Fish and invertebrates also would be monitored in Phase II, the department said in a background document. The plan also includes a biodiversity component to review the impact of oil sands-related contaminants on wildlife populations and of habitat disturbance on biodiversity, the agency said.

Oil sands are naturally occurring mixtures of sand or clay, water, and a dense and viscous form of petroleum called bitumen, which can be extracted and refined into synthetic crude oil. Oil sands development can have significant environmental impacts on air, water, and land.

U.S. environmentalists have raised particular concerns about the Keystone XL pipeline project that would transport up to 700,000 barrels per day of crude oil from the Alberta oil sands through five states to heavy oil refineries on the Texas Gulf Coast. (See above) The U.S. State Department has said it expects to make a decision on whether to approve the pipeline by the end of the year.

Output from the oil sands is set to double to 3 million barrels per day by 2020.

Critics say Canada's Conservative government -- a vocal backer of the oil sands -- is far too beholden to the energy industry and puts too little emphasis on protecting the environment.

59. Bipartisan Trio Says Tax Oil to Fund U.S. Infrastructure

Three heavyweights from U.S. politics are offering a twist on the chronic funding shortage for the country's infrastructure: taxing oil directly. Former U.S. Senator Bill Bradley, former Pennsylvania Governor Tom Ridge, and former U.S. Comptroller General David Walker, said levying a tax on oil would fund transportation projects and drive down oil dependence.

"We, three leaders representing the U.S. political spectrum, recommend that a solvent transportation program be ensured through the stable pricing of oil and petroleum products as the best immediate strategy," they wrote in a recent report. Under the proposal, the U.S. government would charge a 5 percent ad valorem tax on oil upstream, either at production or importation, when world oil prices rise. It would tax gasoline and diesel at the retail level when oil prices fall. "This will dampen oil demand on the way up and slow price crashes on the way down," the three said.

Bradley fought Al Gore for the Democratic presidential nomination in 2000. Ridge was the first Secretary of Homeland Security under Republican President George W. Bush.

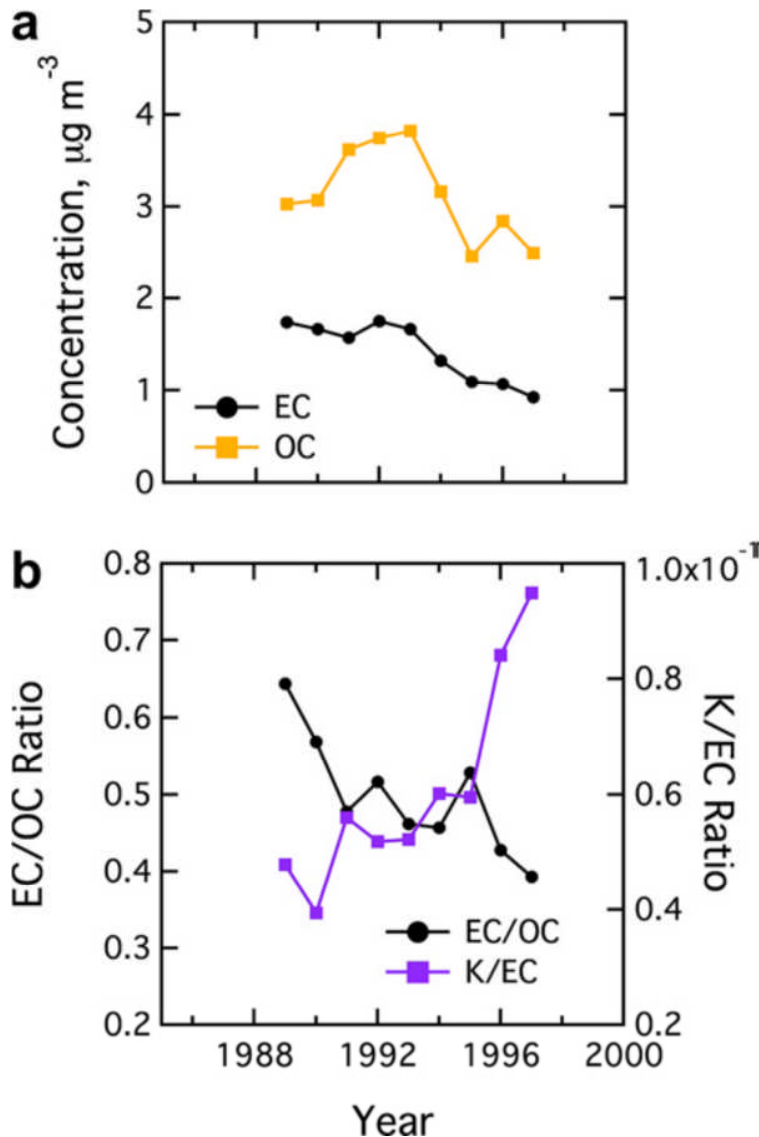
Currently, transportation projects are funded by a gas tax of 18.4 cents per gallon charged consumers at the pump. The money frequently runs short, leaving the federal government to foot part of the bill. Meanwhile, states often cannot plan longer-term maintenance or new starts for their roads and bridges because of funding uncertainty.

The Republican leader of the House of Representatives Transportation Committee recently suggested a spending authorization that would limit funding to only gas tax receipt levels. Almost immediately, transportation groups, Democrats and the business community cried foul.

But no one is sure where to find extra funds, with President Barack Obama saying there will be no hikes to the gas tax as long as the economy is struggling. Proposals to charge drivers fees

based on how many miles they drive have largely stalled. Privatizing existing roads, meanwhile, and leaving them to corporations for upkeep has generated political disputes at the state and federal level.

60. Diesel Controls Work According To Recent Study



The authors examined the temporal and the spatial trends in the concentrations of black carbon (BC) recorded by the IMPROVE monitoring network for the past 20 years in California¹. Annual average BC concentrations in California have decreased by about 50% from 0.46 mg/m³ in 1989 to 0.24 mg/m³ in 2008 compared to the corresponding reductions in diesel BC emissions (also about 50%) from a peak of 0.013 Tg/Yr. in 1990 to 0.006 Tg/Yr. by 2008. The authors attribute the observed negative trends to the reduction in vehicular emissions due to stringent statewide regulations. Their conclusion that the reduction in diesel emissions is a primary cause of the observed BC reduction is also substantiated by a significant decrease in the ratio of BC to non-BC aerosols. The absorption efficiency of aerosols at visible wavelengths determined from the observed scattering coefficient and the observed BC also decreased by about 50% leading to a model-inferred negative direct radiative forcing (a cooling effect) of 1.4 W/m² (60%) over California.

In response to comment, the authors addressed possible sampling biases relating decreases in black carbon (BC) measurements from the IMPROVE monitoring network to diesel emissions in California. A decrease in average BC concentration of between 40 and 60% is found at each site between 1988 and 2007, consistent with the statewide average of 50%. No significant regional biases are found to drive these trends, which are independent of latitude as well as mean BC concentration. Therefore, the authors find no reason to revise the conclusions of their study in response to the methodological issues raised.

¹ Bahadur, R., et al., 2011. Impact of California's air pollution laws on black carbon and their implications for direct radiative forcing. *Atmos. Environ.* 45 (5), 1162e1167.

61. Canada Requires Renewable Content in Diesel Fuel

On July 20th, Environment Canada published final regulations that require 2 percent renewable fuel content in all diesel fuel and home heating oil sold in Canada as of July 1st. The final regulations retained the July 1 implementation date despite industry comments on draft regulations suggesting that it needed more time to adapt, the department said in a statement accompanying the final amendments to the Renewable Fuels Regulations in the Canada Gazette, Part II. “[The Canadian government] is balancing competitiveness impacts on eastern refiners with the need to minimize delays to support the Canadian biodiesel industry,” it said. The department stressed that the regulations contain significant flexibility for industry, including a permanent exemption for Newfoundland and Labrador, temporary exemptions in the first compliance period for Quebec and the Atlantic provinces, an extended first compliance period for all refiners, and trading of compliance units.

62. Metal Theft on the Rise Recently

A man was arrested recently for allegedly cutting off catalytic converters from vehicles parked in train station parking lots and trading them in for cash at a local scrap dealer. In 1975, catalytic converters were mandated for vehicle exhaust systems to reduce pollution-causing emissions and contain small amounts of precious metals that can be scavenged from inside the converters and reportedly sold for thousands of dollars an ounce.

A review of Montgomery County police reports shows metal thefts have risen in the past few years with thieves stealing copper wire from construction sites and downspouts from homes. Recently, copper was pilfered from a communications tower. Even manhole covers occasionally go missing.

Lewis Granger, 37, was taken into custody near a SEPTA lot, carrying a black bag that contained a Ryobi Sawzall — a portable battery-powered saw — as well as extra blades, batteries, a charger and a flashlight, according to a criminal complaint. The next day, Granger admitted to police that he used the Sawzall to saw off about eight converters from vehicles since April in SEPTA lots. The converter thefts have become more common in SEPTA lots across the Philadelphia region.

Granger reportedly plugged his portable saw’s charger into an outlet at the Cash for Gold store shortly before he was arrested. That evening, a woman started her Honda at the lot and heard a loud rumble, the tell-tale sign that her converter has been removed — the very same one Granger would later admit he stole.

After cutting the parts off underneath the vehicles, he allegedly took the stolen converters to a “scrap shop” and was paid between \$30 and \$110 a piece for the parts. Lately, he had a friend take the stolen parts there, according to court papers.

The rise in metal thievery has been attributed to a steady rise in commodity prices in recent years.

63. California Air Board Expands Clean-Fuel Shipping Zone

More than half of oceangoing vessels serving the ports of Los Angeles and Long Beach have been skirting traditional shipping lanes to avoid air pollution curbs, prompting California officials

to extend the state's clean-fuel zone beyond the Channel Islands. The unanimous vote by the California Air Resources Board came after strong protests from the U.S. Navy that the jump in commercial ship traffic across the Point Mugu Sea Range was "seriously jeopardizing successful completion of vital Department of Defense testing and training missions."

California's clean-fuel zone, which took effect in July 2009, is the toughest ship pollution rule in the world, requiring oceangoing vessels to substitute less-polluting oil for the bunker fuel they commonly use.

As originally designated, California's coastal zone encompassed a strip 24 nautical miles wide, including traditional shipping lanes between the Channel Islands and the shore. But shippers began to travel beyond the islands — motoring through the 36,000-square-mile area where the Navy conducts tests involving missiles, ships, submarines and aircraft. Since the clean-fuel zone took effect, the number of ship transits through Navy waters jumped from an average of two a day to as many as 15 a day, according to the Navy.

More than 40% of U.S. imports travel through the ports of Los Angeles and Long Beach.

Burning of bunker fuel has been a major contributor to asthma, cancer and other illnesses in neighborhoods around the ports. Between 2009 and 2015, the clean-fuel zone is expected to prevent 3,500 premature deaths, according to the air board.

64. Easy Ride Ending For California Hybrid Drivers

The fast, easy ride is about to end for owners of hybrid cars in California. A state program will expire that has for six years allowed drivers of gasoline-electric vehicles to zip through freeway traffic in the express lanes otherwise reserved for carpools. California has bestowed carpool passes on 85,000 motorists in cars such as the Toyota Prius and the Honda Civic Hybrid, who were given stickers designating them as "clean air" automobiles.

The end of the carpool allowance has hybrid owners grumbling, while warming the hearts of motorists who rely on old-fashioned internal combustion engines for their commutes.

California created the program, which always had a built-in sunset provision, to encourage motorists to choose low-polluting vehicles. A revised program is set to take effect next year that will provide similar incentives to a newer generation of clean cars. Because they can plug into an external power source, the Chevy Volt and the next-generation Prius Hybrid are expected to qualify for California's green carpool sticker coming out on January 1, 2012. The state will issue 40,000 of those stickers, which will expire in 2015.

Ending the program for the first-generation hybrids was necessary to make room for the next wave, supporters say.

Manufacturers and dealers estimate California consumers purchased 100,000 hybrid cars over the years to take advantage of the carpool program. The carpool stickers program was so successful that supply far exceeded demand, so much so that in the used-car market, a hybrid vehicle with a sticker on it would command a sales premium of \$3,000 to \$6,000.

There are over 400,000 hybrid cars now registered with the California Department of Motor Vehicles, said Jaime Garza, a spokesman for the agency.

The California carpool lanes -- which for regular gasoline-burning cars require a minimum of two occupants to gain entry -- are still open to owners of compressed natural gas and electric vehicles. They get a white sticker. Over 15,000 vehicles have qualified for that program, which ends in 2015.

65. Survey Ranks San Francisco Greenest U.S. City

San Francisco is the greenest city in North America, followed by Vancouver and New York, according to the latest survey of green-city rankings. The survey, commissioned by Siemens Corp and conducted by the Economist Intelligence Unit, looked at 31 indicators, ranging from consumption of water and electricity to efficiency standards.

Detroit was the least green of 27 cities ranked, just behind St. Louis, the survey said.

According to the survey, cities with comprehensive plans for sustainable use of resources such as land and energy, did better in the rankings, and that the correlation between wealth and environmental performance was not as strong in North America compared with Europe and Asia.

Siemens has developed green-city indices for Europe, Latin America, and Asia. This was the company's first for North America.

Similar surveys show slightly different results, but with the same broad group of cities tending to flock to the top. For example, the Daily Beast this year ranked New York, Las Vegas, and San Francisco as the top three. The website factored in criteria including the percentage of residents who admitted in a survey to "no concern or consciousness of environmental issues."

ASIA-PACIFIC

66. Viet Nam Adopts Vehicle and Fuels Roadmap

The official roadmap for Euro 3, 4, 5 was enacted by the Vietnam Prime Minister on 1 September, 2011. The following is the approved roadmap for Vietnam:

	Vehicle emissions	Motorcycle emissions	Fuel quality
Euro 4	1 Jan. 2017		1 Jan. 2016
Euro 5	1 Jan. 2022		1 Jan. 2021
Euro 3		1 Jan. 2017	

67. Japanese Panel Considers Stricter Rules for Large Trucks & Bus Emissions

The Japanese government has convened a committee to study stricter regulation of emissions from large trucks and buses for introduction in 2016, according to officials of the Ministry of the Environment and the Ministry of Land, Infrastructure, and Transport. The planned changes are part of Japan's long-term efforts to reduce vehicle emissions of carbon monoxide, hydrocarbons, sulfur dioxide, nitrogen oxides, and particulate matter while improving fuel efficiency, an official of MOE's Environmental Management and Technology Office said.

However, a senior auto industry official told the press that the government moved up convening the so-called Study Committee on Vehicle Emissions in Off-cycle, chaired by Waseda University professor Yasuhiro Ohijiri, after receiving reports that many Japanese trucks and buses emit far

more air pollutants than considered appropriate. The committee held its first meeting on August 5th.

Under current regulations for large trucks and buses, emissions are measured in a vehicle driving mode known as JEO5, an MLIT official said. The mode includes testing when the vehicle is being idled, accelerated, driven at very slow speed, cruising, and slowing down. The industry official told the press that some truck and bus manufacturers have exploited the JEO5 mode by configuring mechanisms to emit more noxious gases in driving conditions not covered by that test.

The official said the two ministries plan to conclude the committee's meetings by the end of the year and added that the panel will publish results to be reflected in the next, tougher emissions regulations for large trucks and buses. He said these would apply to both domestic and foreign manufacturers.

Committee meetings are closed to the media for "assuring automakers' confidential information," another MLIT official said.

68. Japan Must Develop New Energy Technology Policy, Government Panel Says

Japan should create a long-term national energy project to reduce its dependence on fossil fuel and nuclear power, a government policy committee said in a recommendation on August 15th. Efficient energy systems should be developed, such as self-sufficient homes and offices or electric motors with zero energy loss, the committee said.

Because of Japan's \$1.3 trillion public-sector deficit, the project needs to be financed by the private sector, Hiroya Makino, an official with the Research and Development Division within the Ministry of Economy, Trade, and Industry, told the press.

The recommendation was released by the Research and Development Study Committee of the ministry's Industrial Structure Council.

In light of dimming prospects for Japan's nuclear power and high global oil and other energy prices, Japan needs to promote a grand national energy project "that departs from existing technology and is based on breakthrough technology" to both secure energy for itself and bolster the Japanese economy, the committee said.

The proposed national project is separate from Prime Minister Naoto Kan's plan to develop lithium-ion and other next-generation batteries, hybrid motor vehicles, more efficient solar power generation systems, and other technologies, Makino said. While the Kan project aims to increase the share of renewable and other clean energy sources, the study committee's recommendation focuses on the development of efficient energy systems, Makino said.

The study committee's recommendation also follows the Environment Ministry's August 9th release of a draft environmental plan. Like Kan's energy plan, the ministry's draft plan focuses on renewable energy, as well as recycling and biodiversity issues.

69. Japan Proposes to Improve Car Fuel Economy by 25 Percent by 2020

On August 19th, the Japanese government proposed to raise the average fuel economy requirement for passenger cars to 20.3 kilometers per liter (47.7 miles per gallon) of gasoline by

2020, up 25 percent from the current standard of 16.3 km/l (38.3 mpg). The draft plan, which would go into effect in 2012, was released for a one-month public comment period. The requirement would apply to domestic and foreign automakers that obtain motor-vehicle type certification from the Ministry of Land, Infrastructure, and Transport.

The standard would apply to passenger vehicles powered by gasoline, diesel, gasoline or diesel hybrid, and ethanol, an official of the Ministry of Economy, Trade, and Industry told reporters. Plug-in hybrid and electricity-powered vehicles would be counted only partially when computing the corporate average fuel economy (CAFE), he said.

Each automaker's CAFE would be based on the cars it sells in the Japanese domestic market; exports and overseas production would not be considered, the official said.

The government is proposing to raise fuel efficiency standards because domestic automakers and most importers achieved the current target in fiscal 2009, which ended March 2010, beating the deadline of the end of fiscal 2015, according to transport ministry officials. They also pointed out that while Japan's gross greenhouse gas emissions in fiscal 2009 decreased 5.6 percent, passenger vehicle emissions soared as much as 28 percent over the preceding year.

The Ministry of Economy, Trade, and Industry official acknowledged that another reason was President Obama's announcement earlier in August of a new auto fuel efficiency target that seeks to double the CAFE level to 54.5 mpg, or about 23 km/l, a level that Toyota's Prius hybrid, at 50 mpg, falls short of meeting.

Fuel consumption would continue to be calculated using the so-called JCO8 mode.

The latest fuel improvement target is the third to be set under the Energy Conservation Act of 1979. The first target was introduced in 1999 under a "top runner method," which designated the best-performing manufacturer as the pacesetter and required others to follow its lead.

Comments on the proposed CAFE standards are due by Sept. 18.

70. Recent Developments in China

A. Chinese Owners Reporting Problems with EVs, Praise Low Cost of Driving

Owners of the first batch of electric vehicles are reporting many problems, including a lack of charging facilities, weak air conditioning and insufficient braking power, after the first three months of trial use. "It's just not cold enough even after I turn on the air conditioner to the maximum power," said Zhu Xiao, who has driven a Chery M1 electric car since April. "I also found that it's better to hit the brake a little bit earlier, as the braking power lags behind that of the gasoline-powered cars," she said.

The 28-year-old office worker from the Shanghai International Automobile City Group Co in Jiading District was among the first batch of eight private users of emission-free vehicles in Shanghai over the past three months. They were offered models produced by four Chinese auto makers including Lifan, Chery, Zotye and BYD.

After vehicle defects, difficulty in battery charging was car owners' next-biggest concern. Although several charging poles have been set up in their working area, some car owners had to return their vehicles to the car maker for recharging due to different charging standards.

Although there is still some inconvenience in using EVs, the cost advantage remains the big attraction. "It took me only 200 Yuan (US\$31) for the driving cost in the past three months, which is really cheap amid the rising gasoline prices," Zhu told Shanghai Daily. "I have no intention of changing my EV, and I am confident those problems will all be solved with the widespread use of those environmentally friendly models in the future," Zhu said.

Shanghai is encouraging the use of green models via purchase incentives and trial operations. Rong Wenwei, general manager of the automobile city development group, said it may take a long time to replace existing cars with green cars in terms of safety and convenience. But still, people are interested.

According to an official from the auto city, about 100 visitors a day have gone to the newly opened test drive center for EVs over the past two months. The city plans to have 20,000 new energy vehicles running on the streets by next year with 25,000 charging poles.

B. Clean Vehicles in China Face Hurdles in Technology, Consumer Indifference

China's delayed announcement of a "new energy" vehicle plan with incentives for electric, hybrid, and fuel-cell models has raised questions about technological standards, intellectual property rights, and consumer acceptance for such vehicles, as well as the need for better market structures and infrastructure.

China's New Energy and Energy-Saving Vehicle Industrial Plan (2011–2022) was expected to be released earlier this year with a possible spending target of 100 billion Yuan (\$15.6 billion) over the next 10 years. But the Ministry of Industry and Information Technology said in mid-July that the plan might not be ready this year. The plan also could be scaled back in scope with less ambitious spending levels, the ministry said.

The State Council currently is reviewing the draft plan, the ministry said.

Three ministries—Industry and Information Technology; Finance; and Science and Technology—and the National Development and Reform Commission met in Beijing on July 22 to discuss the industrial development plan and meet with representatives of 25 cities chosen for new energy vehicle demonstration projects, as well as with representatives of auto companies developing such vehicles, the Ministry of Science and Technology said in a notice on its website on August 3rd. The 25 cities include 13 original pilot cities selected to begin incentive programs during China's 11th Five-Year Plan (2006–2010): Beijing, Changchun, Changsha, Chongqing, Dalian, Hangzhou, Hefei, Jinan, Kunming, Nanchang, Shanghai, Shenzhen, and Wuhan. Seven more cities will be included in a second tier: Guangzhou, Haikou, Suzhou, Tangshan, Tianjin, Xiamen, and Zhengzhou. The remaining five cities—Chengdu, Huhehaote, Nantong, Shenyang, and Xiangfan—will make up the third tier of the program.

Premier Wen Jiabao published an article on July 16th in the influential Communist Party publication *Qiushi* in which he questioned the path of new energy vehicle development. Wen said the country had "not been very clear about development directions and goals" and that though development of hybrid vehicles and electric bicycles has had some success, there were still major questions about "overall technology, core technology, investment plans, and policy support" for new energy vehicles.

Ministry of Industry and Information Technology Vice-Secretary Zhang Xiangmu said at a recent forum in Beijing that subsidy policies for fuel-efficient and clean energy vehicles had not been finalized and that current policies could be canceled or restructured, according to an August 15 report appearing on Huagu, a government financial news portal. Zhang said the industry in China faces technical and structural barriers, but that the government is fully behind its promotion.

New energy vehicle development is one of seven “key strategic new industries” that the government announced in late 2010 would be supported under the current 12th Five-Year Plan (2011–2015). The industrial development plan will focus on the 25 pilot cities, most of which have companies working on new energy vehicles and supporting technologies. In addition, the city of Zhongshan in south China's Guangdong province has been chosen as the major production base, according to the Ministry of Industry and Information Technology.

In late July 2011, the three ministries and the National Development and Reform Commission said that sales taxes and registration fees for new energy vehicles would be reduced in the 13 original pilot cities, though this will be implemented locally so the timing is uncertain.

Those cities have seen more hybrid and electric taxis and buses added to city transportation fleets and more hybrid and electric cars purchased by government agencies, but very little in consumer sales that would help spur development of more charging stations and other energy infrastructure that can handle different electricity loads when vehicles are charging.

The central government has realized that there is “basically no hope to achieve” a previous goal for producing 500,000 new energy vehicles by 2015, and the target could be halved to 250,000 in the new industrial plan, according to press reports. It is also uncertain what kind of subsidy policies will be announced by the central government and whether the subsidies would go to consumers, producers, or both. Previously, central government subsidies and local government matching subsidies were available in some of the original 13 pilot cities for producers upon sale, with the savings theoretically passed on to consumers in the sales price. But according to analysts, even though the subsidies reduced prices to near the level of traditional passenger vehicles, sales have been slow due to consumers' lack of trust in the new technology.

For the past few years, consumers could get a 3,000 yuan rebate (\$570) for buying a more energy-efficient vehicle, but analysts have said the amount is too low to attract consumers in great numbers.

C. China's FAW Rolls Out First Batch of New Energy Vehicles

Major Chinese automaker First Automobile Works (FAW) has launched the first batch of its independently-developed new energy vehicles. The first 20 new-energy vehicles include the company's Besturn plug-in hybrids (PHEV) and pure electric vehicles (EV).

Xu Jianyi, FAW chairman, said FAW will stick to the strategy of developing both hybrid and electric-fueled vehicles in the future. "The company will invest 9.8 billion yuan (1.5 billion U.S. dollars) in the next five years to develop and build eight new-energy vehicle production platforms," Xu said, adding that FAW has planned to develop 13 new-energy passenger car models and three commercial vehicle models during the period.

The company's production line will be soon able to realize a yearly production capacity of 10,000 units of new energy vehicles this year, he said.

The Besturn PHEV model, which has obtained patents in both China and America, reportedly can consume 60 percent less petroleum than a traditional car. It can drive 70 km on a single charge using only the electric motor, said FAW engineer Li Jun. The Besturn EV model can run 170 km on a single charge, he said.

D. Beijing's Efforts to Ease Traffic Gridlock Begin to Pay Off: Official

Beijing's traffic woes have been slightly eased since a series of measures were put into effect in the first half of 2011, according to a senior transportation official. Liu Xiaoming, director of the Beijing Municipal Commission of Transport, said during a legislative session in the city that the average driving speed during rush hour reached 24 km per hour in the first half of the year, a 10 percent increase over that of the same period last year.

"It is a good sign that the comprehensive measures have taken effect. But tackling gridlock is still a strenuous and long-term task," he said while delivering the commission's work report at the 26th Session of the Standing Committee of the 13th Beijing Municipal People's Congress.

He said that the measures have yielded a measurable effect, even though the number of vehicles on the city's roads in July jumped by more than 600,000 in comparison to last July's number. Beijing registered more than 4.8 million motor vehicles as of the end of last year, with 800,000 new vehicles purchased in 2010.

Growth in automobile sales has affected the city's efforts to improve its transportation infrastructure in recent years.

The city government introduced a regulation in January that curbed the growth of new vehicle sales by capping the total number of cars that could be registered in 2011 at 240,000. The regulation also required potential buyers to participate in a lottery in order to obtain new purchase permits.

Although the number of new vehicles keeps increasing, the city government has used comprehensive measures to encourage people to use public transportation, including hiking parking fees in downtown areas and improving public transportation facilities and services.

Liu said that Beijing's subway trains now arrive within two minutes, a decrease of 30 seconds from the previous average waiting time. In addition, three new subway lines are scheduled to be opened before the end of the year, according to Liu.

Beijing has also retained an "even-odd" driving regulation that it created just before the 2008 Beijing Olympics. The regulation requires private drivers to stay off the roads on different days of the week depending on whether their license plate number ends in an odd or even number.

Experts said a more comfortable and convenient public transport system is the key to solving the city's long-standing traffic congestion problems. However, they did admit that it has a long way to go to attract private car owners.

Zhang Zhuting, an expert on public transport at the Ministry of Transport, believes comfort and convenience levels on the city's buses and trains must be improved. "A low-price strategy is not a long-term solution," Zhang said. "We need to rate the public transport system through comprehensive indexes, such as comfort, convenience and safety," Zhang said.

Experts also said the lack of coordination between buses and the subway remained a problem. Zhang Changqing, an expert on public transport law at Beijing Jiaotong University, pointed out that usually the city's subway stations and bus stations are not located near each other due to uncoordinated planning. "If the bus and rail systems could be linked, it would be a cutting-edge advantage," he said.

Statistics from the commission show that the public transport system had already recorded a daily volume of 19.43 million individual journeys in the first quarter of 2011, a figure close to Beijing's population of 19.61 million residents.

Pressure mounted on the bureau earlier this month when a poll on its website showed only 47 percent of residents believed the traffic situation was improving, which raised doubts about the effectiveness of the city's new measures. The report noted a sharp reduction in the number of cars in parking lots due to the rise in parking fees, with a 12 and 19 percent drop in the number of cars in parking lots and off-street garages.

The Ministry of Public Security said that Beijing had 4.64 million vehicles by June, but only 2.5 million parking spaces.

E. Scourge of Overloading

Nothing can be more illustrative of the damage overloaded trucks cause to highways and bridges than the collapse of two bridges in a week. The truck that caused one end of a bridge to collapse in Wuyishan, East China's Fujian province on July 14, had a carrying capacity of 15.5 tons, but was actually loaded with more than 60 tons of cargo.



A 14-meter-long truck is estimated to have been carrying about 160 tons of sand when a bridge in Beijing's suburban Huairou district broke under its weight. The bridge is near a site where the illegal mining of sand is rampant and trucks reportedly transport sand in the evening to evade inspection.

Overloaded trucks in pursuit of maximum profits were said to have been running across both bridges fairly often in recent years and it seems the trucks involved were just the final straws.

Overloading has been a scourge in recent decades. Campaigns have been organized nationwide many times to crack down on this particular transport rule violation but to little avail.

It is estimated that the cost of repairing the highways and bridges damaged by overloaded trucks is as much as 30 billion Yuan (\$4.6 billion) a year and that the lifespan of highways or expressways is reduced by 50 to 60 percent.

In addition, trucks overloaded cause about 70 percent of traffic accidents on expressways.

But why do so many transport firms run the risk of traffic accidents and fines to overload their trucks? One of the explanations is that too many tollgates charge too high fees, which have considerably raised the cost of transportation, and overloading cargo is what transport companies use to offset such fees. This may not be unreasonable as the fees charged by toll stations are said to constitute one third of the total cost of the country's logistics.

Currently self-employed transporters make up nearly 90 percent of the nearly 7 million transport firms nationwide, which means competition is fierce and profits are thin. Overloading their limited number of trucks will be one of the few ways for them to make a profit.

The regulations on the protection of highway safety that took effect on July 1 this year will ban drivers and vehicles from the transport sector after three overloading violations, and firms will be closed down if 10 percent of their vehicles violate the rules within a year. Enforcing this should be only the first step in a push to restructure the sector and tackle the overloading problem.

F. Automobile Ownership to Exceed 100m by Year's End: CMIF

Despite a slowdown in automobile sales during the first half of the year, the number of vehicles in China is expected to exceed 100 million, climbing by 18 percent from a year earlier, experts said recently. "There is no doubt that the number of automobiles in China will increase at least 15 million to a total of 100 million by the end of this year, although the sales growth of auto products has been weakened by strategic adjustment in the industry," Zhang Xiaoyu, vice-president of China Machinery Industry Federation (CMIF), told China Daily.

Zhang said in the second half of this year growth in sales of private cars and buses will lead an increase across the industry, as market demand still exists despite lower growth in both production and sales.

According to data from CMIF, the year-on-year growth rate of auto sales slowed to 3.25 percent in the first half of the year, compared with 30 percent and nearly 50 percent annual growth rates in 2010 and 2009, respectively. Production and sales of private cars numbered 4.92 million and 4.95 million respectively, rising by 7.03 percent and 8.02 percent compared with the previous year.

The slowing growth of auto sales resulted from the expiration of the government's two-year period of incentives, including a reduced purchase tax and subsidies to trade-ins, and a limit on sales in big cities, which was aimed at easing congestion.

"The improvement of energy efficiency and development of 'green' vehicles are vital for China's automobile industry as the vehicle population increases at a fast rate," said Wang Fuchang, deputy director-general of the equipment manufacturing industry with the Ministry of Industry and Information Technology (MIIT). "By 2020, the vehicle population will hit 200 million in China," Wang estimated.

According to the CMIF, 50 percent of the total production of gasoline in China is currently used as fuel for automobiles. The annual production of crude oil is about 200 million tons.

"The strategic adjustment is targeted at accelerating the upgrade of the auto industry, spurring auto makers to speed up the development of new energy automobiles, instead of curbing auto sales in the long term," Zhang said.

For the first half of this year, sales of sport-utility vehicles (SUVs) increased by 20 percent in the Chinese market. Imported SUVs witnessed an increase of more than 50 percent domestically.

To strengthen the development of the auto industry, domestic automakers are striving to promote car exports. Data from the China Association of Automobile Manufacturers shows that the export volume of Chinese automobile products grew 32.44 percent to \$24.9 billion, while the import value reached \$28.7 billion, an increase of 26.99 percent year-on-year, for the first five months.

G. 50 Million New Cars a Year by 2021 in China: DRC

Despite a slowdown this year, the Chinese auto market may triple in size over the next 10 years, said a senior member of an influential government think tank. "The Chinese auto industry is likely to reach a peak of 50 million units over the next decade," said Liu Shijin, deputy director of the Development Research Center (DRC) of the State Council. In fact that estimate is "conservative", he said, noting sales could hit even 60 or 70 million vehicles a year.

For the past two years, China's auto market has experienced explosive growth to become the world's largest. Vehicle production and sales in the country both surpassed 18 million units last year, a 38 percent increase over the 13 million sold in 2009.

Yet in the first six months this year, the market geared way down to year-on-year growth of just 4 percent. Liu predicted that vehicle sales could grow by 10 percent by the end of the year, a little more than the rise in overall GDP. He added that it is "normal" for the market to decelerate this year after such skyrocketing growth in 2009 and 2010.

Liu said for the next 10 years, the auto sector, as a mainstay industry of China, will maintain a growth rate higher than that most other sectors. Without elaborating, he also predicted that China could be the world's biggest auto export base in the next decade. Liu made the remarks at a recent press conference for the release of an annual report on China's automotive industry. The yearly report, first published in 2008, was jointly compiled by the DRC, the Society of Automotive Engineers of China (SAE) and Volkswagen Group China.

This year's report summarizes the past decade in China's auto industry. It also features a study on small and lightweight cars that offer big potential for China's automakers to reduce fuel consumption and emissions, said Fu Yuwu, secretary-general of SAE. According to the report, Japan is the role model in producing cars with small engine displacement. In Japan more than one-third of vehicles have engines smaller than 1 liter, while in China the ratio is just 6 percent, the report said.

It also found that China's passenger vehicles have average carbon dioxide emissions of 182L/100km, compared with 154L/100km in the EU and 155L/100km in Japan.

Electric vehicles are also an important part in the industry's prospects for the next decade. Liu of the DRC said China is likely to play a decisive role in the sector's development. But Fu from SAE was more cautious, noting that "without major breakthroughs, mass production of electric

vehicles is still a problem, not only in China but also in the world". He noted development of the sector issue requires cross-industry efforts.

Zhang Suixin, executive vice-president of Volkswagen Group China, agreed with Fu that it is not now feasible for electric vehicles to replace cars with internal combustion engines. He said the issue hinges on whether there is significant progress in energy density in lithium batteries, while cutting their cost at the same time. "Our plan is to start small volume production of electric vehicles in China in 2013," Zhang said.

H. China Steps Up Energy Saving In Transport

China will strengthen energy saving and emission reductions in road and waterway transport in the next five years as the central government decides to allocate funds to support it. According to a document jointly released by the Ministry of Finance and the Ministry of Transport, public institutions and companies that carry out energy-saving and emissions-reducing work will be eligible for the funding support. The document did not say how much the aggregate funding during the five years ending 2015 will amount to, but those engaged in the program may receive up to 10 million Yuan (\$1.55 million) in awards for their energy-saving and emission-reduction efforts.

Companies and public institutions will be awarded with as much as 600 Yuan for each metric ton of the equivalent of coal they save each year, the document said. Meanwhile, those using alternative fuels will be awarded up to 2,000 Yuan for each ton of standard oil they substituted, according to the document.

I. China Wants More Electricity from Biomass

China is aiming to increase its capacity for biomass power generation from the current 5.5 million kilowatts to about 13 million kW by 2015, outpacing planned solar capacity, according to a statement posted on the National Development and Reform Commission website on July 11. China's solar goal is 10 million kilowatts of installed capacity by 2015.

The plan for biomass expansion was revealed by Liu Tienan, head of the National Energy Administration, at a rural energy conference in Beijing. It is double the goal for biomass energy previously announced by the China Electricity Council for the period.

Most of China's biomass generation taps agricultural and municipal solid waste sources, according to analysts. It is unclear how much of this is connected to the electric grid, however. According to Liu, some 500 million people in rural China do not receive energy from the two main national grid companies. New biomass and other localized renewable energy pilot projects will be established in about 200 "rural green counties," Liu said, though only 108 of these counties have been formally announced.

Some communities in these counties would also be part of a 1,000-town "solar model village" pilot project to install solar water heating systems and other small solar panel systems to help meet their electricity needs, Liu said.

J. China Threatens to Stop Orders of Airbus Aircraft over EU Trading Scheme

China has threatened to put a hold on orders of new Airbus passenger jets unless the European Union eases its new carbon emissions allowance rules, an official with the company said on

July 18th. Rainer Ohler, Airbus senior vice-president for public affairs, said the company has been told that the Chinese government is “holding back” on approving further purchases of Airbus aircraft until its concerns about the cost of its air carriers’ inclusion in the European Union’s Emissions Trading System (ETS) have been addressed.

Ohler’s comments came three weeks after Airbus on June 28th signed a deal estimated to be worth more than €7 billion (\$9.85 billion) with two Chinese aircraft leasing firms for 88 Airbus A320 passenger jets. The signing ceremony was attended by German Chancellor Angela Merkel and Chinese Prime Minister Wen Jiabao.

However, the German financial newspaper Handelsblatt reported that the Chinese government said it was prepared to block a separate order for 10 Airbus A380 super jumbo jets with a catalog price of some €4 billion (\$5.6 billion) to pressure the European Union to bend on the ETS issue.

Airbus has been critical of the European Union’s decision to proceed with the plan to include airlines in the ETS. “We believe that climate change is a global problem that requires a global solution,” Ohler said. “The Europeans have an agreement on a regional solution, and that won’t work.”

EU legislation finalized in 2008 requires all airlines arriving in or departing from the European Union to participate in the ETS starting in 2012, meaning they will receive an allowance of carbon dioxide emissions credits, and must buy additional credits for excess emissions. The European Commission said March 7 that airlines would have their carbon emissions capped at 212.9 million metric tons in 2012.

According to the International Air Transport Association, airlines are expected to purchase 68.4 million metric tons of additional carbon emissions allowances in 2012 above their allocation and to increase the purchase to 133 million metric tons by 2020. Each emissions allowance represents the right to emit one metric ton of carbon dioxide-equivalent. Assuming an average cost of €15 (\$21) per ton of carbon dioxide-equivalent, airlines would be required to purchase about €1.03 billion (\$1.45 billion) of emissions allowances in 2020, IATA said. This figure could rise to €4 billion (\$5.7 billion) if the cost of the permits rises to €30 (\$42) per ton, and to a total of more than €13 billion (\$18.3 billion) if carbon prices increase more than anticipated or if the European Union reduces the number of free emissions allowances allocated to airlines.

China is not the only place where the ETS is controversial. On July 5, the European Court of Justice in Luxembourg held a hearing on a complaint filed by the Air Transport Association of America, American Airlines, Continental Airlines, and United Airlines charging that the ETS was in violation of international law both as an extraterritorial action and an improper tax or charge.

The China Air Transport Association also has threatened to initiate a case against the ETS at the European Court of Justice, warning that the scheme could cost its carriers hundreds of millions of dollars per year.

Isaac Valero-Ladron, the European Commission’s climate spokesman, said “there is no way Europe will back down, amend, or withdraw” the ETS legislation. “The most constructive way to work is not threatening particular companies but to continue working with us,” Valero-Ladron said, referring to the notion of “equivalent measures.” Under the 2008 EU legislation, airlines may be given bigger emissions allowances if their home countries reach an agreement with the

European Union recognizing equivalent measures to reduce carbon emissions and avoid “double regulation.”

Valero-Ladron said the Commission was not aware of any specific contracts being brought into question by the Chinese government. Noting the June 28 deal between Airbus and the Chinese leasing companies, he added that the Chinese “are threatening, but at the same time they're buying.”

K. China to Cap Total Energy Use, Will Issue Environment Targets for Provinces

China may attempt to cap its total energy consumption at a coal equivalent of 4.1 billion metric tons annually, or roughly 28 percent above current consumption levels, as it grapples with limited natural resources and energy security, an official with the National Energy Administration (NEA) said at a conference in Beijing on July 9th. According to the state-run Xinhua news agency, NEA head Liu Tienan said “energy security” is a permanent concern for China due to inadequate natural resources, adding that the country will “not allow wanton consumption of energy resources.”

One day earlier, NEA said that six industries—electricity, steel, construction, non-ferrous metals, chemicals, and petroleum—accounted for 42.7 percent of China's energy consumption growth over the first half of 2011, and that a total cap on energy use will target the country's “most energy-intensive industries.”

Overall energy consumption in China stood at about 3.2 billion metric tons of coal equivalent at the end of 2010, Liu said, adding that China consumed about 20 percent of the world's energy supply while generating only about 10 percent of global gross domestic product.

Earlier in the year, NEA said there would likely be a total energy consumption target of 4.1 billion metric tons coal equivalent by 2015. According to various reports, NEA, the National Development and Reform Commission (NDRC), and other ministries are talking with the State Council about how to allocate targets and conduct audits on the provincial level to ensure the energy-use caps are met.

NDRC, the Ministry of Environmental Protection, and other ministries are expected to begin unveiling specific plans for energy conservation and environmental protection under the 12th Five-Year Plan (2011–2015) after the State Council's leading group on energy conservation convenes a meeting in Beijing sometime in July, NDRC said in a report posted July 8 on its climate change department website. The report said that provincial, regional, and industrial sector targets will be allotted for energy intensity reduction, carbon intensity reduction, energy conservation, and key pollutants—including emissions of sulfur oxides and nitrogen oxides in air and chemical oxygen demand and ammonia nitrogen in wastewater—designated for reduction under the 12th Five-Year Plan.

L. China Approves Plan for Energy 'Golden Zone'

The central government has approved plans for an energy industry “golden zone” linking Shaanxi province and the autonomous regions of Ningxia Hui and Inner Mongolia in northwestern China, said an autonomous region official recently. “After thorough research and investigation, we applied to the National Development and Reform Commission and the National Energy Administration to establish the 'golden zone' and have received approval and

support," Wang Zhengwei, chairman of the Ningxia Hui autonomous region, told a news conference.

The blueprint for the zone, connecting the energy-rich regions of Yulin city in north Shaanxi province, Ordos in southwestern Inner Mongolia and the Ningdong energy and chemical base in Ningxia Hui autonomous region, was first proposed by Vice-Premier Li Keqiang during an inspection of Ningxia in February 2010.

The zone covers nine cities and areas in Shaanxi and Gansu provinces and the Ningxia Hui and Inner Mongolia autonomous regions and spreads over 240,000 square kilometers. Energy production in this area accounted for 21 percent of China's primary energy output in 2010.

The Securities Times cited the development guidelines for the zone as saying that by 2020, coal production in the zone will total 1.45 billion tons, while oil output will reach 54 million tons and that of natural gas will stand at 55 billion cubic meters.

Wang said that 20 State-owned enterprises have invested more than 120 billion Yuan (\$18.56 billion) in the Ningdong energy and chemical base and have developed the base into an advanced production facility for chemicals including carbinol, dimethyl ether and coal-based alkene.

Sun Hongbo, a senior researcher at the Chinese Academy of Social Sciences, said the development of a "golden zone" of energy in western China is significant for the region and the country. "Many parts of China are facing energy shortages, and the abundant energy resources including coal and natural gas in the zone can meet that demand," said Sun. "The development of the 'golden zone' will promote local economic growth and create jobs." However, he said the government should avoid over-dependence on energy production when developing policies for the region. "The project will bring big profits in the short term, but in the long run, sustainable and balanced development is needed," he said.

The development of the energy "golden zone" is part of the autonomous region's plan for a new Ningxia. "In the next five years, we will double the gross domestic product, fixed-asset investment and the incomes of urban and rural residents," Wang told the news conference.

Ningxia recorded gross domestic product of 164.3 billion Yuan in 2010, 2.7 times that of 2005. Local fiscal revenue reached 15.4 billion Yuan, an average annual increase of 26.4 percent.

The autonomous region's government is determined to develop an economic zone along the Yellow River, which is an important component of the "golden zone" of energy. The economic zone along the Yellow River will help transport the coal of the Xinjiang to Ningxia and lay the groundwork for importing oil and natural gas from the Middle East and Central Asia.

M. China Launches Energy-Saving Reconstruction in 40 Cities

China's Ministry of Housing and Urban-Rural Development selected 40 key cities for the public building energy-saving reconstruction project during the 12th Five-Year period, China Securities Journal has reported. These cities are required to reconstruct no less than 4 million square meters in the next two years, with the fiscal allowance of 20 Yuan (\$3.1) per square meter.

According to statistics from the Energy Conservation Service Industry Committee of the China Energy Conservation Association, China currently has a building area of 43 billion square

meters, in which the public building area accounts for over half, and less than 10 percent of these public buildings are sufficiently energy saving.

If calculated on the basis that reconstruction costs 2,500 Yuan to 3,000 Yuan per square meter, the market value of the public building energy saving reconstruction project will reach about 50 trillion Yuan, and the market value in each of the selected 40 cities will reach 400 billion Yuan.

N. China to Boost Offshore Wind Power

China will increase its offshore wind power installed capacity to 5 gigawatts (GW) by 2015 and 30GW by 2020, the National Energy Administration has announced. The public tender for the second round of offshore wind power concession projects with a total installed capacity of 1.5GW to 2GW will be completed during the first half of 2012, the administration said at a meeting held in the city of Nantong, Jiangsu province.

Liu Qi, deputy director of the administration, said that relevant departments should recognize the importance and urgency of developing offshore wind power. The country often faces severe power shortages in summers, with power generation and transmission systems unable to cope with rising demand. China faces a 30GW power shortfall this summer, according to data from the China Electricity Council.

Liu said the country should expedite the establishment of an advanced and fully-equipped offshore wind power industry to boost its large-scale development. In June 2010, Shanghai's East Sea Bridge's 100MW offshore wind farm project was completed. It is currently the only offshore wind farm that has been put into operation outside of Europe.

O. NDRC Appeals To Adjust Car Quota Limit

China's top economic planner is appealing to adjust or scrap the Beijing municipal government's policy to limit new car quotas, the National Business Daily said recently. In a report submitted to China's State Council, the National Development and Reform Commission also linked Beijing's steps to tackle ever-worsening traffic gridlock to slowing auto sales in the country, the newspaper said. The NDRC along with other unspecified organizations were also appealing to make adjustments to similar policies by other local governments, it said, but did not elaborate.

The Chinese central government in early 2009 issued a raft of stimulus measures, including tax incentives for small cars, which helped China surpass the United States as the world's top auto market. It scaled back the incentives in 2010 and scrapped them completely at the beginning of this year.

Automobile demand has been cooling down, with monthly sales in May declining for the first time in more than two years. Industry observers expect slow sales to continue into the summer months followed by a mild rebound in autumn.

P. New Energy Vehicle Sector Faces Growing Pains

Changchun introduced 100 hybrid vehicles to its public transportation network in 2010. It will add another 100 this year. At the eighth China Automobile Fair currently being held in Changchun, the China FAW Group, one of the country's largest automakers, debuted two new hybrid bus models. Hybrid vehicles have been making a splash outside public transportation as well. On July 8th, Changchun implemented 16 measures that are intended to promote private

purchases of new energy vehicles. The city plans to offer 500 new energy cars to assigned customers, for whom a basic post-sale service system will be established.

"This year is a demonstrative year for the development of new energy vehicles in Changchun. We will boost the sector through a raft of favorable policies," said Xiao Wanmin, deputy mayor of Changchun.

Liu Minghui, the director of the electric vehicle department of the China FAW Group's research and development center, said the company also plans to initiate a trial run for its B50-model electric car this year. The company has vowed to develop hybrid and purely electric vehicles for all of its commercial vehicle and passenger car product lines. "Ten years ago, when the country first started to develop new energy vehicles, the electric vehicle sector was still at the research stage. Now, our management team has realized that its era has arrived," Liu said.

Changchun isn't the only city working to promote the sale and use of new energy vehicles. In June 2010, five cities, including Shanghai, Changchun and Shenzhen, began to subsidize the purchases of new energy vehicles on a trial basis. This number has since increased to 25. In addition, a new plan that will outline the development of the country's new energy vehicle sector of the next ten years is expected to be publicized soon.

However, most of these policies have so far failed to woo the private market. Several new energy car dealerships in Changchun have seen zero sales for electric cars, with some of them lacking even a proper display model for their stores. "Sales of electric cars in other cities like Beijing, Shanghai and Hangzhou have been the same. Dealers in those cities also refrain from exhibiting the cars in their stores, as their sales have been pretty bad," said one car dealership employee in Changchun.

Sales of new energy vehicles have not been encouraging in the country's trial cities. In Shanghai, licenses for new energy cars are rarely issued. BYD Co. Ltd., one of the country's leading carmakers, has only sold a few hundred of the vehicles.

Consumers have largely held back due to concerns regarding the safety and ease of use of new energy vehicles. "Why don't the drivers of these new energy buses turn on the air conditioning?" complained commuters in Changchun during a recent heat wave. Along with good qualities such as low noise and high stability, new energy vehicles also have their share of weaknesses. "The buses will break down if the air conditioning is left on. We can afford no power increases, as water in the vehicle can reach 100 degrees Celsius when the air conditioning is on," a bus driver surnamed Chen said. Chen said the air conditioning system in his bus broke down after a year of use and cannot be used again until a new motor is installed in the bus.

In addition to previously encountered problems such as the short lifespan of electric batteries, other factors such as incomplete industry standards, poor management and safety risks have troubled the growth of the new energy vehicle sector, according to industry experts. Due to a lack of relevant industry standards, electricity suppliers and automakers are still wrestling with questions over how the vehicles' batteries should be designed and operated.

"From a global point of view, the battery problem is an obstacle that will be hard to hurdle for the new energy vehicle sector," Nigel Clark, a professor of mechanical and aerospace engineering at the United States' West Virginia University, said during the Changchun auto show.

Guo Konghui, an academician from the Chinese Academy of Engineering, said the development of new energy vehicles is still at an exploratory stage, even in developed countries. "If the past five years can be viewed as a developing period for the sector, the next five years will be a time for the industry to crack down on key issues," Guo said.

Q. China Urges Developed Countries to Cut Carbon Emissions

Developed countries should take a lead in adopting verifiable goals to greatly reduce per capita carbon emissions, according to Foreign Ministry Spokesman Hong Lei. Hong said at a regular press conference that according to statistics of the International Energy Agency (IEA), the current level of per capita emissions in the developed countries is several times that of developing countries.

Hong made the remarks in response to German Chancellor Angela Merkel's comment that emerging economies must share part of the burden in reducing emissions along with industrialized nations, which she said is of "fundamental importance" to China.

Hong said China places great importance on climate change. He said the Chinese government has adopted reduction goals, taken actions and achieved results that are "not less sufficient" than any developed countries and are fully recognized by all countries. Hong said China has demonstrated a great sense of responsibility on global issues with "no empty talk and focus on action and results." From 2006 to 2010, China has cut the amount of carbon produced per unit of economic output by 19.1 percent, compared to that in 2005.

Hong emphasized that climate change is a daunting challenge. It requires joint responses by all countries in line with the United Nations Framework Convention on Climate Change and the "common but differentiated responsibilities" principle set by the Convention. "We are ready to continue to work with the international community, including Germany, to jointly advance international cooperation on addressing climate change in line with the requirements of the Convention and Kyoto Protocol and the authorization of the Bali Roadmap," Hong said.

Scientists and a UN panel on climate change have proposed developed countries cut 25 to 40 percent of their carbon emissions as per 1990s levels. However, the commitments made so far by developed countries collectively amounted to only a 13 to 17 percent cut.

Spokesman Hong said the Chinese side agreed with the proposition that per capita carbon emission should be reduced in order to achieve the goal of limiting the rise of global temperatures by two degrees Celsius. Merkel said that achieving the goal would require reducing carbon dioxide emissions per capita each year to two tons, with the US standing at 20 tons, Germany at 10 tons and China around 4 tons.

The Kyoto Protocol, the only global pact legally binding 37 rich countries to cut emissions, is set to expire at the end of 2012. But developed and developing countries are divided on whether to progress the protocol to the second phase or scrap it and set up new rules.

At international climate talks held in Bonn, Germany in June, Chinese delegation head Su Wei said developed countries should make progress on extending the Kyoto Protocol and setting new emissions cuts targets, and those rich nations that have refused to join Kyoto must make "comparable commitments." He said long-term climate funding will be a focus at the UN climate conference to be held in Durban in South Africa later this year. At the 2009 Copenhagen summit, developed countries pledged to offer \$30 billion of "fast start" aid to poor nations to combat

climate change and obtain clean-energy technology from 2010 to 2012. But part of the funds is not "new and additional financial aid" as required in Copenhagen. Until now, there has been no concrete financial aid promises from developed countries beyond 2013. Last year's Cancun deal included a formation of the so-called Green Climate Fund, in which developed countries will channel 100 billion dollars of climate funding per year by 2020. But how to raise and allocate the money remains unclear. "We must find solutions to mid-term funds from 2013 to 2020 in Durban, and developed countries should fulfill their commitments in Copenhagen and Cancun," Su said.

R. Sulfur From Chinese Power Stations 'Masking' Climate Change

The huge increase in coal-fired power stations in China has masked the impact of global warming in the last decade because of the cooling effect of their sulfur emissions, new research has revealed. But scientists warn that rapid warming is likely to resume when the short-lived sulfur pollution – which also causes acid rain – is cleaned up and the full heating effect of long-lived carbon dioxide is felt.

The last decade was the hottest on record and the 10 warmest years have all occurred since 1998. But within that period, global surface temperatures did not show a rising trend, leading some to question whether climate change had stopped. The new study shows that while greenhouse gas emissions continued to rise, their warming effect on the climate was offset by the cooling produced by the rise in sulfur pollution. This combined with the sun entering a less intense part of its 11-year cycle and the peaking of the El Niño climate warming phenomenon.

The number of coal-fired power stations in China multiplied enormously in that period: the electricity-generating capacity rose from just over 10 gigawatts (GW) in 2002 to over 80GW in 2006 (a large plant has about 1GW capacity).

But rather than suggesting that cutting carbon emissions is less urgent due to the masking effect of the sulfur, Prof Robert Kaufman, at Boston University and who led the study, said: "If anything the paper suggests that reductions in carbon emissions will be more important as China installs scrubbers [on its coal-fired power stations], which reduce sulfur emissions. This, and solar insolation increasing as part of the normal solar cycle, [will mean] temperature is likely to increase faster."

Prof Joanna Haigh, at Imperial College London, commented: "The researchers are making the important point that the warming due to the CO₂ released by Chinese industrialization has been partially masked by cooling due to reflection of solar radiation by sulfur emissions. On longer timescales, with cleaner emissions, the warming effect will be more marked."

The cooling effect of sulfur pollution on climate has long been recognized by scientists studying volcanic eruptions, which have, for example, caused failed crops and famines in the past. Sulfur dioxide forms droplets of sulfuric acid in the stratosphere, which increases the reflection of the Sun's heat back to space, cooling the Earth's surface.

The effect also explains the lack of global temperature rise seen between 1940 and 1970: the effect of the sulfur emissions from increased coal burning outpaced that of carbon emissions, until acid rain controls were introduced, after which temperature rose quickly. Some have even proposed sulfur dioxide could be used to geoengineer the planet by deliberately injecting millions of tons into the atmosphere to combat warming.

The new study, published in the Proceedings of the National Academy of Sciences, analyzed possible reasons for the flat 1998-2008 temperature trend using climate models and concluded that it was unlikely to be due simply to the random variation inherent in the planet's climate system. Instead it found the effect of sulfur, the sun and El Niño dominated, with the El Niño climate phase peaking in 1998 – the hottest year ever recorded – then moving into a phase dominated by its cooler mirror image, La Niña. The scientists ruled out changes in water vapor or carbon soot in the atmosphere as significant factors.

They emphasized the rapid increase in coal burning in Asia, and in China in particular, noting that Chinese coal consumption doubled between 2002 and 2007: the previous doubling had taken 22 years.

S. China to Reduce Carbon Intensity By 17% By 2015

China will soon release detailed plans on ensuring that its goal for reducing carbon intensity from 2011 to 2015 is attainable, and it has started looking at technical options for cutting carbon dioxide emissions after 2020. Xie Zhenhua, vice-minister of the National Development and Reform Commission (NDRC), said recently at a conference that a comprehensive plan to allow China to meet its objective - laid out in the 12th Five-Year Plan (2011-2015) - of reducing carbon intensity by 17 percent reduction will be released soon.

China has set a target to cut its energy intensity (the amount of energy consumed for each unit of GDP) by 16 percent and reduce its carbon intensity (the amount of carbon emitted for each unit of GDP) by 17 percent from 2011 to 2015.

"The targets surely need to be handed over to local governments, and a specialized blueprint for cutting greenhouse-gas emissions is a necessity," Su Wei, director-general of the Department of Climate Change of the NDRC, told China Daily.

According to a draft plan released in January, the areas will be divided into five types with various energy intensity reduction goals ranging from 10 percent to 18 percent.

The target is a step in the government's pledge to cut carbon intensity by 40 to 45 percent from 2005 levels by 2020.

The NDRC has also begun working out ways to attain further, large-scale reductions of carbon dioxide emissions after 2020.

Xie said that China considers carbon capture and storage (CCS) an important technical means of reducing carbon dioxide emissions in the next few decades, and that the country should already be working toward the development of the emerging technology. CCS development faces great uncertainties worldwide because of the high costs and safety concerns, and several projects in developed countries were halted last year. Despite the challenges, China won't rule out CCS as a key technical option in the future, but its use will depend on its competitiveness and the global demands for emissions reduction, he added.

Foreign companies count on China to take a leading role in the commercialization of CCS, but according to Su, China sees CCS mainly as a means of reducing carbon dioxide after 2020 and 2030. Xie called for international collaboration in research and technology transfers from developed countries.

China has set targets to boost its non-fossil-fuel use to 15 percent of energy consumption by 2020, and many obsolete and inefficient coal-fired power plants have been closed. However, coal remains the primary source of energy in China, the world's largest consumer of coal, with more than 70 percent of the country's energy consumption depending on it.

T. China Set To Cap Energy Use in National Low-Carbon Plan

A cap on Chinese energy consumption is expected to be the highlight of a comprehensive low-carbon plan to be issued later this year, but it might not be as tough as expected, experts say. Capping energy use will form the cornerstone of China's efforts to curb surging greenhouse gas emissions, the world's highest and making up a quarter of the global total. China is using the fight against climate change to make its economy more efficient and kick-start emissions trading schemes over the next five years.

A five-year plan to improve energy efficiency, cut greenhouse gases and tackle pollution was approved "in principle" last month by a panel set up by China's cabinet, the State Council, and chaired by Premier Wen Jiabao. Few surprises are expected, with many of China's five-year carbon dioxide (CO₂), energy and pollution targets already confirmed. But formal recognition is likely to be given to six pilot low-carbon zones in the provinces of Guangdong and Hubei and the cities of Tianjin, Beijing, Chongqing and Shanghai.

Government officials seem to have settled on a total energy cap of 4.1 billion tons of coal equivalent by 2015, more than 25 percent higher than last year, following months of behind-the-scenes wrangling. Zhang Guobao, formerly China's senior energy official, told state news agency Xinhua after his retirement in March that the cap would stand at 4 billion TCE, and some scholars involved in the discussions last year were proposing a figure as low as 3.6 billion TCE.

The cap will be a crucial component of China's efforts to meet energy and carbon intensity targets over the next five years, giving regions and industries something to trade on. In its national five-year plan unveiled during the last session of parliament in March, China pledged to improve energy efficiency by 16 percent from 2011-2015 and cut the amount of CO₂ produced per unit of GDP by 17 percent over the period. It eventually plans to bring carbon intensity down by 40-45 percent by 2020 from 2005 levels, following a pledge it made before global climate talks in Copenhagen in 2009.

The key issue will be how the aggregate national targets are allocated to the provinces -- those numbers have already been calculated and issued to local governments, but they are expected to be published in this year's plan.

Above all, China wants to avoid a repeat of the problems that beset the country in the second half of last year, when provinces shut down large swathes of industrial capacity in a desperate effort to creep below their 2006-2010 targets. That means the government will focus on market mechanisms, such as emissions trading, in the coming five years, but it is also setting up an early-warning system to notify provinces if they fall behind.

The National Development and Reform Commission has for the first time published the names of regions that were struggling to meet targets, including undeveloped and resource-dependent Ningxia, Qinghai and Xinjiang in the northwest as well as the economic powerhouse of Jiangsu on the eastern coast.

While the targets are not as tough as some hoped, many of the regions are still likely to feel the squeeze as they try to balance out the need to grow with the need to be green.

The plan is also likely to include absolute targets to restrict a series of major pollutants, targets already passed by the Ministry of Environmental Protection. Reports suggest it will also propose tougher energy-saving building codes, more backing for hybrid cars and further instructions to eliminate aging industrial capacity.

A stronger "responsibility system" will also be put in place to make local officials directly liable for failing to meet their local energy and carbon targets.

Xinhua, citing a government official, said the plan would also encourage financial institutions to raise support for low-carbon projects, and banks will also set up green rating systems to help allocate funds to clean energy projects. The official said the new plan was expected to introduce proposals for variable power pricing, with fixed tariffs identified as one of the major causes of waste.

U. More Action by Hong Kong, China Needed To Control Shipping Emissions

While some international shipping lines have volunteered to use low-sulfur fuels while in Hong Kong waters, more action is needed by the local and mainland Chinese governments to reduce air pollution from ships, experts said at an August 17th discussion hosted by the Clean Air Network. Simon Ng, a shipping emissions expert at the Hong Kong University of Science and Technology, said that while emissions of air pollutants from industry and land transportation have been declining, civil aviation and ship emissions have grown in Hong Kong over the past decade, seriously impacting the health of those living close to the waterfront. Ng is producing a study on shipping emissions for the Hong Kong Special Administrative Region government that could be released by the end of this year. He said about 10 percent of Hong Kong's sulfur dioxide emissions come from ships, with the highest concentrations occurring at the waterfront. Preliminary results from his study show that 70 percent or more of the sulfur dioxide and particulate matter emitted from ships in Hong Kong comes from larger, oceangoing vessels, he said, while the rest is from small, local vessels, many of which come from Guangdong province on the Chinese mainland.

"This government needs quite a bit of pressure to go forward" with regulations on shipping emissions, Ng said, adding that any regulations should include not only oceangoing vessels, but also the barges, tugboats, and river vessels coming to Hong Kong from Guangdong. A major difficulty is that Hong Kong would need to work closely with the Guangdong government to craft a "low-emission zone" in the Hong Kong-Pearl River Delta Region that would be effective, Ng said.

By the end of 2010, 17 international shipping lines operating in Hong Kong had signed on to the Fair Winds Charter, an agreement to voluntarily use bunker fuel with a sulfur content of 0.5 percent or less while in Hong Kong waters. The voluntary agreement runs through 2012.

Any regulatory efforts Hong Kong imposes would of course need to be balanced so smaller local shipping companies do not go out of business, Ng said. "The government needs to set up a road map for switching to cleaner fuels," he said. "The biggest barrier is the cost issue, especially for better fuel quality on small, local vessels. They really need the government to show support and construct a policy that works."

According to Hong Kong Ship Owners Association Managing Director Arthur Bowring, the Fair Winds Charter has covered about 80 percent of ship calls in Hong Kong over the past eight months. Bowring said international shipping companies are experimenting with solar, wind, and wave power technologies to help reduce their emissions. But for Hong Kong, he said, "We really need the right incentives in place from the government [to go forward]."

On July 15, the International Maritime Organization adopted mandatory measures to reduce greenhouse gas emissions from international shipping, including mandatory energy efficiency design requirements for new ships and energy efficiency management plans for all ships. The measures will take effect on January 1st, 2013, for ships with a gross tonnage of 400 and above.

71. Taiwan Proposes to Ban Lengthy Idling of Vehicles

Drivers of motor vehicles that idle for more than three minutes could be fined up to 60,000 Taiwan new dollars (\$2,070) under a proposal announced on August 11th by the Environmental Protection Administration. Certain types of vehicles, including ambulances, tow trucks, broadcast vans, police cars, and school buses, would be exempt while on duty, according to draft regulations that the agency plans to issue in September for public review. Under an amendment to the Air Pollution Control Act finalized in April, drivers who idle their vehicles longer than a time limit set by the agency are subject to fines ranging from TWD\$1,500 (\$50) to TWD\$60,000. Exemptions would apply when temperatures exceed 30 degrees Celsius (86 degrees Fahrenheit) to avoid heat-related illnesses, as well as when drivers are stuck in traffic jams, TEPA Chief Secretary Shu-Chiang Fu told a news conference. If no objection is made at public hearings, the regulations would take effect in March 2012. The cities of Tainan, Hsinchu, and Taichung currently have motor vehicle idling regulations.

72. Indian Government Considering Dual Pricing of Diesel

The Indian government is mulling dual pricing of diesel wherein the luxury car owners may have to pay market rate and the sale of subsidized fuel would be restricted only to farmers and transport trucks. "These are all proposals which are being considered by the Finance Ministry," Oil Minister S. Jaipal Reddy told reporters when asked if the government was considering dual pricing of diesel.

Diesel is the most consumed fuel in the country but is sold at a discount to the cost of production. Diesel subsidy currently is Rs 6.82 per liter and on an annualized basis it would amount to Rs 52,365 crore out of the total fuel subsidy estimated at Rs 114,336 crore in the current fiscal year. The subsidized diesel is the preferred fuel for the transport sector (both trucks and passenger buses) and is also used in irrigation pumps and other agriculture equipment. But luxury cars and SUVs too run on diesel and so do power generators at malls and telecom towers.

It has long been argued that rich should not get subsidized fuel and that subsidized diesel being used to light malls or power telecom towers is a wasteful expenditure. "The Finance Minister rightly expressed concern about mis-utilisation of subsidized diesel for many things like power generators," Mr. Reddy said. "So these are all proposals and I cannot give a final shape. I made some proposals, however, it is up to the Finance Minister to consider," he said.

"Fifteen per cent (of the diesel sold in the country) is for passenger cars - where we can accept your suggestion and try to work out what mechanism can be found so that these sections are not subsidized," finance minister Pranab Mukherjee said during the debate on price rise in

Parliament. Janata Dal (United) MP Sharad Yadav had suggested that the government could consider higher prices for luxury cars.

If implemented, diesel prices would rise by Rs 6.82 a liter to align them with international rates. But the fuel would still remain attractive compared to petrol. At present, diesel costs Rs 41.29 a liter in Delhi, compared to Rs 63.7 for a liter of petrol, which translates to a gap of more than 35%. An increase of around Rs 7 a liter would still mean that diesel would be 24.5% cheaper than petrol.

Passenger cars are the second biggest consumer of diesel after trucks, which consume around 37% of the total supply. Mukherjee said 12% each goes for farming and plying buses. He said another 10% is used by the industry, 8% for power and the remaining 6% goes to the Railways.

The large price differential between the two auto fuels is the main reason for the spurt in diesel car sales in recent years. While the government has decontrolled petrol prices, allowing oil companies to align retail rates in line with international prices, diesel is still a regulated commodity.

Mukherjee's statement is being seen as a dampener for the passenger vehicle industry that is already staring at a slowdown on account of the rise in interest rates and petrol prices. Major players said that diesel was leading the growth momentum in a sluggish market and any major increment in the fuel price could slow this.

"We are in favor of market-driven price for diesel, although it will bring sales further down as the market is already sluggish," P Balendran, VP for General Motors in India, said. Other major players, who requested anonymity, said sales would be "severely impacted" if the measure went through as diesel cars were fuelling sales.

While diesel cars comprised 18-20% of total car sales in India in 2004-05, their share has climbed to over 35% now. According to official data, of the 25 lakh passenger vehicles sold in India, nearly nine lakh are diesel cars. Of these, more than one-third are small cars such as Indica, Swift and Figo.

Finance ministry officials, however, said a dual pricing mechanism for passenger cars on one hand and other diesel-consumers, including agriculture, buses, trucks and industry, on the other, would be difficult to implement. "It is desirable but not doable," said an official. The move would create a parallel economy. "If a dual pricing structure is in place, people would come in tractors, fill up drums with diesel and then sell it to car owners at a premium, but below the market price for passenger cars," said an official.

In fact, officials said that the proposal to levy higher excise on diesel vehicles would also not solve the problem of a high subsidy bill, though it would improve targeting of subsidies.

Industry body, Society of Indian Automobile Manufacturers (SIAM), however, appeared to be in favor of decontrol. "SIAM has always been advocating market-linked pricing of automotive fuels, including diesel. Petrol pricing is already market-based and this move by the government may be the first step in moving towards full market pricing of diesel," said Pawan Goenka, President of SIAM. However, the industry body added that commercial applications of diesel passenger vehicles should be exempted from the dual pricing.

73. Diesel Tax Soon To Be Reinstated in Thailand

The government will soon reinstate the diesel tax, as oil prices have stopped spiking, says Energy Minister Pichai Nariphaphan. The exact time frame for collection and the tax rate were not revealed. Ironically, he said his first action in his new position would be to suspend collecting levies on premium petrol (benzene 95) and regular petrol (benzene 91) for six months. This would reduce the price of premium petrol by 7.50 baht a liter and regular petrol by 6.70 baht a liter.

Mr Pichai earlier said the Oil Fund would again collect fuel levies once the public was earning more as a result of government economic policies.

The previous government cut the excise tax on diesel from 5.31 baht per liter to half a satang in May and waived municipal tax of 53.1 satang to honor its policy of keeping the price below 30 baht a liter.

Mr Pichai said a huge subsidy for liquefied petroleum gas (LPG) by the state Oil Fund in the transport sector could also be terminated. The move comes after the previous Abhisit Vejjajiva government already agreed on a gradual float of the LPG price in the industrial sector. The transport and industrial sectors account for 25% of LPG consumption, the household sector 44% and petrochemicals 30%.

The minister said another urgent action for the ministry is to revise the country's power development plan (PDP). The PDP is now being reviewed by the Energy Ministry in line with the global economic meltdown, and the new one is expected to be finished within the next two months.

The existing plans focus on coal-fired plants and nuclear power.

74. Minibus, Taxi Fare Hike Ruled Out in Calcutta

A fare hike for minibuses and taxis was ruled out for the time being after a section of transport operators that had gone on strike on July 14 said it would "give the new government more time" to consider its demands. Private bus operators have not yet demanded a fare hike following an upward revision of the price of diesel on June 25. But several minibus and taxi operators had been demanding higher fares since June 26. Two of the three major taxi unions and the main minibus union had taken part in the July 14 strike.

All the three unions met transport minister Subrata Bakshi at Writers'. "This is a new government. It needs more time. We will wait till September to see what the government does for us," said Abashesh Daw, the general secretary of the Minibus Operators' Co-ordination Committee.

Bakshi told the operators that the government was neither in a position to offer a subsidy on diesel price nor was it willing to allow a fare hike as it would burden commuters. "I made it clear that a fare hike cannot be considered right now. Our fiscal condition will not allow us to offer a subsidy. We will try to find ways to help the operators," the minister said.

The operators requested the government to take steps to reduce the operational cost of running vehicles, which Bakshi agreed to consider.

Bimal Guha, the president of the Bengal Taxi Association, said the operators were "satisfied" with the discussion and "liked" the government's attitude towards transporters.

75. Clinton Takes "Clean Cookstove" Drive To India

Secretary of State Hillary Clinton pushed one of her simplest but potentially most transformative diplomatic priorities in India recently: clean cooking stoves. Clinton, who last year launched a \$50 million U.S. drive to bring clean cooking stoves to developing countries to cut deaths from smoke inhalation and fight climate change, visited an Indian demonstration site to watch some of the stoves in action.

Clinton watched several Indian women working different models of cookstoves, ranging from a traditional fire to the new model stoves which burn both hotter and more efficiently, reducing the need for fuel and cutting emissions.

"The women here today represent women all over the world who are by and large the biggest users and victims of cookstoves," Clinton said after smiling and greeting each of the women crouched by their different stoves. "We will work with people around the world to help develop clean cookstoves, help to manufacture them so they are affordable for you to buy them."

A U.S. official traveling with Clinton said improving cooking stoves in India alone could have a major impact. Cooking fires are blamed for some 400,000 deaths in the country each year, mostly of women and children, and for as much as a quarter of India's emissions of soot or "black carbon," which along with ozone air pollution is seen as a major driver of global warming.

Clinton used her visit to announce that two major Indian trade federations were signing on to the clean cooking stove initiative, potentially using their huge networks to spread both the word and the technology behind the new cookers.

Clinton has advocated for clean cooking stoves on many of her trips to the developing world, seeing it as a way both to improve the environment and empower women, long one of her signature issues.

U.S. funding, which will be spread over five years, is part of a Global Alliance for Clean Cookstoves to spearhead the fight against a problem officials equate with malaria and unclean water in terms of its health impact worldwide.

Some 1.9 million premature deaths occur annually due to smoke inhalation from rudimentary stoves, which in many cases consist of a few stones and an open fire inside or outside a shelter.

Campaign officials say the aim is to make better cooking technology available at relatively low prices -- ranging from \$10 to \$100. The cook stoves are not given away, which officials say can make them seem less valuable for the recipients, but the program aims to set up micro-lending programs or other methods to make them affordable, including potentially using carbon credits to offset loans for the purchase price.

The alliance seeks to have 100 million homes adopt cleaner stoves and fuels by 2020, and campaigners say they hope that the drive will spread -- creating new and more innovative stoves which can further cut emissions. "It's not about a specific stove, it's about reaching the target," one official said. "We are trying to set a standard that anyone can follow."

SOUTH AMERICA

76. Petrobras Approves 5-Year, \$225 Billion Investment Plan

The board of Brazil's state-run Petroleo Brasileiro SA (Petrobras) has approved a \$224.7 billion, 5-year investment plan, with about 57% of the projected outlays to be spent on exploration and production. "We believe this plan to be solid and affordable, with all the conditions required for long-term implementation without compromising the company's financial health," said Petrobras Chief Executive Officer Jose Sergio Gabrielli de Azevedo.

The company's plan will invest 57% in E&P; new E&P projects will account for 87% of total new projects' spending, and about 95% of the total spending is to be in Brazil. E&P spend will total \$127.5 billion, of which \$117.7 billion will be allocated to Brazil, 65% for production development, 18% for exploration, and 17% for infrastructure.

The presalt areas will absorb 45% of the total E&P investment in Brazil and 50% of the total amount allocated for the production development.

Gabrielli said the projected E&P investment will increase Petrobras's production to 6.4 million boe/d in 2020 and 4 million boe/d in 2015 from the current 2.7 million boe/d. "Presalt output alone will add up to almost 2 million boe/d in 2020," Gabrielli said, noting that the presalt's contribution to production will rise to 40.5% in 2020 and 18% in 2015 from the current 2%.

Gabrielli said the growth in output from the presalt reserves will be achieved by setting up 30 extended well tests (EWTs) over the next 5 years, including 20 in the presalt cluster, and 10 in the postsalt area.

Petrobras's total sales of 3.8 million boe/d in 2010 are expected to grow 6.6%/year, reaching 5 million boe/d in 2015, and more than 7 million boe/d in 2020. Gabrielli said these volumes include sales of oil products, biofuels, electricity, fertilizers, natural gas, as well as exports and international sales.

Gabrielli said there was an increase of \$8.7 billion in investments set aside for new E&P projects, including production facilities for presalt areas acquired under the transfer of rights agreement and operating infrastructure. "The plan demands additional personnel, and staffing levels are expected to rise from the current 85,000 to 103,000 in 2015, including subsidiaries and employees based abroad," said Gabrielli. "The E&P segment will absorb most of this growth as it keeps pace with the rise in production," Gabrielli said.

Gabrielli noted investments planned to improve energy efficiency and cut greenhouse gas emissions "through voluntary commitments to reduce gas flaring in E&P operations and decrease energy intensity at refining and gas and energy plants, among other initiatives, with investments totaling \$1.2 billion by 2015."

For refining, transportation and trade (RTT), and petrochemicals, the plan calls for a total of \$74.4 billion in investments by 2015. New refineries, fuel quality programs, and plant upgrading will absorb 74% of the funding earmarked for RTT. "Investments slated to increase refining capacity will primarily meet the expanding needs of the Brazilian market," he said.

Gabrielli discussed two financial scenarios for the plan. The first is based on Brent crude trading at \$110/bbl in 2011 and \$80/bbl in subsequent years, and on Petrobras's sales averaging

\$158/bbl. The second sees Brent at \$110/bbl in 2011 and \$95/bbl through 2015, with an average price for Petrobras's product sales of \$177/bbl. In these two scenarios, the expected cash flow for 2011-15 would be \$125-148.9 billion, said Gabrielli, who explained that cash flow will be the plan's main source of investment.

He said cash requirements will range \$67-91.4 billion, which will involve raising between \$7.2-12 billion/year, maintaining an average financial leverage target of 25-35%.

77. U.S., Brazil to Promote Urban Sustainability in Projects Related to World Cup, Olympics

On August 16th, the United States and Brazil launched a joint initiative to stimulate investment in urban sustainability in connection with Brazil's hosting of the 2014 World Cup in 17 cities and the 2016 Olympics in Rio. U.S. Environmental Protection Agency Administrator Lisa P. Jackson and Izabella Teixeira, Brazil's environment minister, made the announcement at a news conference in Rio. "Games-related investments from 2011–2016 are expected to reach \$200 billion in infrastructure and construction projects," said an EPA statement on the Joint Initiative on Urban Sustainability (JIUS).

The initiative will encourage construction of sustainable infrastructure for the sporting events, such as buildings with energy-efficient heating, ventilation and air-conditioning, lighting, and water use. It also will promote clean energy, such as the use of environmentally friendly generators at stadiums.

After the press conference, Jackson told reporters, "We're not just talking about building sustainable stadiums and airports, but about smaller-scale projects, like installing wastewater plants in areas to be impacted by the sporting events, retrofitting existing sporting event buildings to be more energy efficient, and recovering land cleared for the events by planting trees."

Delegates from Microsoft, Alcoa, Morgan-Stanley Bank, and the Rockefeller Foundation represented the U.S. private sector at the launch. Philadelphia Mayor Michael Nutter also attended.

Jackson told reporters that "the Brazilian government, not the JIUS, will decide how to incorporate urban sustainability into both sporting events. The JIUS will simply facilitate such decisions by, say, exploring ways of financing sustainable projects, many of which will be undertaken by public/ private sector partnerships."

The joint initiative will be overseen by a board of 24 members representing the public sector, private sector, and civil society who have experience in environmental finance, policymaking and infrastructure development, EPA said. Work groups will be created to identify public/private partnership opportunities for promoting urban sustainability.

The sustainability initiative is an outgrowth of the U.S.-Brazil Strategic Energy Dialogue, a partnership announced by U.S. President Barack Obama and Brazilian President Dilma Rousseff in March to foster the development of safe, secure, and affordable energy in an environmentally sound way, including energy from oil, natural gas, biofuels, alternative energy sources, and civilian nuclear energy.

That initiative continued on August 15th, when U.S. Deputy Secretary of Energy Daniel Poneman said during a visit to São Paulo that the two countries would work together to build a larger global market for biofuels.

EPA said the sustainability initiative will showcase some of its achievements at the U.N. Conference on Sustainable Development, dubbed Rio + 20, in June 2012.

78. U.S., Brazil to Work Together to Develop Advanced Cellulosic, Algae-Based Biofuels

The world's two largest ethanol producers, the United States and Brazil, will work together to build a larger global market for biofuels, U.S. Deputy Secretary of Energy Daniel Poneman said on August 15th.

“With our ethanol production capacities and our technical capacities to advance into future generations of more advanced cellulosic biofuels and algae-based biofuels, we can work together to help create a larger biofuels market and, in so doing, create global demand that will drive down biofuel prices so that car and aviation fleets can start to reduce their global carbon footprint, the objective of our climate change agendas,” Poneman said during a visit to São Paulo. Advanced cellulosic biofuels are produced from wood, grasses, or non-edible parts of plants.

Poneman spoke at a news conference after meeting with members of the São Paulo State Industrial Federation (FIESP), Brazil's largest industrial association.

The United States' deputy energy secretary is leading an interagency delegation to launch the U.S.-Brazil Strategic Energy Dialogue in the capital of Brasília. The partnership aims to foster development of safe, secure, and affordable energy in an environmentally sound way, including energy from oil, natural gas, biofuels, alternative energy sources, and civilian nuclear energy.

President Barack Obama and Brazilian President Dilma Rousseff announced the partnership in Brasilia in March. They pledged to increase cooperation on the development of biofuels, including those used for aviation.

Brazil, the world's largest ethanol exporter, produces biofuel from sugar cane. The United States primarily uses corn.

When asked about U.S. ethanol subsidies for domestic producers and the United States' 54-cent-per-gallon tariff on imported ethanol, Poneman said these were “matters to be dealt with by the U.S. Congress.” In December 2010, Congress passed legislation that extended the ethanol tax credit through 2011 and retroactively extended the biodiesel tax incentive and the renewable diesel incentive through 2011. The legislation also renewed the tariff on imports through 2011.

79. Brazil to Toughen Emissions Standards for New Motorcycles Beginning in 2014

New motorcycles and motorbikes will have to meet more stringent limits on pollutant emissions in 2014 under a resolution (No. 432) published July 14 by Brazil's National Environmental Council (CONAMA). The resolution sets 2014 limits for carbon monoxide, hydrocarbons, and nitrogen oxides for both categories of vehicles, as well as stricter 2016 limits for only motorcycles.

Motorcycles are divided into two categories, depending on whether their maximum velocity is 130 kilometers per hour (80 mph) or not. Faster models have lower allowable emissions levels than slower models. Motorcycles are defined as having engines larger than 50 cc.

The 2014 motorbike/motor scooter emissions limits are one-half to one-quarter of the limits that have been in effect since Jan. 1, 2003, depending on the pollutant. Motorbikes and scooters are defined as having engines of up to 50 cc.

The 2014 limits for motorcycles are two to 10 times stricter than the previous CONAMA limits. They become even more stringent on Jan. 1, 2016. For example, as of that date, new motorcycles in the slower category may emit only 2 grams per kilometer of carbon monoxide, 0.56 gram per kilometer of hydrocarbons, and 0.13 gram per kilometer of nitrogen oxide.

80. Brazil to Require Stickers Rating Cars for Emissions, Fuel Consumption

Brazil's government will require new cars by June 2012 to bear stickers with a single letter rating for air pollutant emissions and fuel consumption, according to Bruno Barbosa, executive secretary of the Finance Ministry. Barbosa told carmakers in a June 22 meeting that "a one-year deadline is a reasonable time limit for the car industry to meet this requirement," according to a ministry statement.

In the second half of 2011, the Environment Ministry's enforcement and licensing arm (IBAMA) will establish optimum emissions levels and the National Institute of Metrology, Standards, and Industrial Quality (INMETRO) will establish optimum fuel consumption levels for 2012 models.

Under the planned "green seal" program, initially outlined in a December 2010 joint IBAMA/INMETRO norm (No. 2), cars will be tested in INMETRO-certified laboratories. INMETRO will then issue a table with a single rating from A (best) to E for each model. Carmakers will be required to display this rating on vehicle stickers.

IBAMA and INMETRO had envisioned the green seal program as voluntary, but the Finance Ministry decided to make it mandatory by mid-2012, according to a ministry spokesman. The green seal program will complement a 2009 resolution (No. 418) by the National Environmental Council (CONAMA) that required states to publish preliminary Vehicle Pollution Control Plans by June 20, 2011. After a 30-day public consultation period, the states must send final plans to state environmental councils for approval.

81. Peru Environment Ministry's Ten-Year Plan Sets Ambitious Goals

On July 14th, Peru's Environment Ministry (MINAM) published a National Environmental Action Plan setting out ambitious goals in the priority areas of water, solid waste, air, forests and climate change, biological diversity, mining and energy, and environmental governance for the next 10 years. The plan, known as PLANAA-Peru 2011-2021 (Supreme Decree 014-2011-MINAM), is defined as "a long-term national environmental planning instrument prepared on the basis of an assessment of the environmental issues and natural resource management, as well as the country's potential for exploitation and sustainable use of these resources."

According to the action plan, deteriorating water quality is "one of the country's most serious problems and limits the potential for using this resource." It identified eight rivers, including the Rimac River that supplies water to the capital, Lima, that face critical problems due to residential, industrial, and mining wastewater discharges.

Disposal of solid waste was also deemed critical, given that only 30.9 percent of waste generated in the country is properly eliminated in landfills. Of this amount, nearly one-third is in Lima. MINAM announced last year a project to build proper landfills in 31 cities around the country. The \$126.5 million project is funded through a loan from the Inter-American Development Bank.

The action plan lists goals for each of the seven areas, calling for treatment of 100 percent of residential wastewater in urban areas and for 100 percent of solid waste in urban areas to be treated, separated for reuse, and properly eliminated. In the area of clean air, the PLANAA calls for the country's 13 principal cities to have air quality plans in place by 2021.

The goal for forests is to eliminate all deforestation on 54 million hectares (133.4 million acres) of primary forests. To protect biological diversity, the plan calls for an 80 percent increase in the area used for organic production of crops. For energy and mining, the plan sets out a goal to have 100 percent of small-scale and artisanal mining operations adopt mining management instruments and 100 percent of large-scale operations use the best technological available for environmental protection.

In terms of environmental governance, the goal is for all sectors in the environmental system to fully implement the action plan.

Environment Minister Antonio Brack, who announced the plan on July 14, called it a “road map that requires a modernized and strong National Environmental Management System with an organization culture and climate that fosters synergies between economic growth, social equality, and ecological value.”

MINAM was created in May 2008 (Legislative Decree 1013) as part of a 99-decree package to implement the free-trade agreement with the United States. The agreement went into effect in February 2009.

MIDDLE EAST

82. Israeli Government Allocates \$40 Million to Reduce Greenhouse Gas Emissions

On August 17th, Israel's Ministries of Environmental Protection and Industry, Trade, and Labor said that they will allocate a combined 151 million new Israeli shekels (\$42.1 million) during the next two years to projects and investments designed to reduce greenhouse gas emissions. A joint committee headed by the director-general of the Environment Ministry and the director of the Industry Ministry's Investment Center will select projects to receive funding totaling about \$31 million. Approved incentives will be divided among industry and agriculture (\$12 million), commerce and services (\$12 million), local authorities (\$4.2 million), and transportation (\$2.8 million).

Each project will receive a subsidy of up to NIS 8 million (\$2.2 million), providing it can deliver quantified reductions in greenhouse gas emissions through at least 2020. Support will be calculated according to the project's total investment, the reduction of greenhouse gases in practice, or the cost of commercial installation of new technologies.

The NIS 151 million budget also includes NIS 40 million (about \$11 million) for new projects and commercial installations that use innovative Israeli technologies. The roughly \$11 million fund

for Israeli innovations will be awarded by the Chief Scientist's Office to projects from all sectors that incorporate new Israeli technologies and have the potential both to develop Israel's clean-tech industry and to be applied abroad.

The inter-ministerial agreement is part of a decade-long national effort to reduce Israel's greenhouse gas emissions by 20 percent, the ministries said in a joint statement. The latest funding is part of a master plan that calls for a total of NIS 2.2 billion (\$613 million) to be invested in energy efficiency, green building, transportation, education, and information by 2020.

GENERAL

83. IMO Adopts Mandatory Energy Efficiency Measures for Ships

Mandatory measures to reduce emissions of greenhouse gases (GHGs) from international shipping were adopted by Parties to MARPOL Annex VI represented in the Marine Environment Protection Committee (MEPC) of the International Maritime Organization (IMO), when it met for its 62nd session from 11 to 15 July 2011 at IMO Headquarters in London, representing the first ever mandatory global greenhouse gas reduction regime for an international industry sector.

The amendments to MARPOL Annex VI Regulations for the prevention of air pollution from ships, add a new chapter 4 to Annex VI on Regulations on energy efficiency for ships to make mandatory the Energy Efficiency Design Index (EEDI), for new ships, and the Ship Energy Efficiency Management Plan (SEEMP) for all ships. Other amendments to Annex VI add new definitions and the requirements for survey and certification, including the format for the International Energy Efficiency Certificate.

The regulations apply to all ships of 400 gross tons and above and are expected to enter into force on 1 January 2013.

However, under regulation 19, the Administration may waive the requirement for new ships of 400 gross tonnage and above from complying with the EEDI requirements. This waiver may not be applied to ships above 400 gross tonnage for which the building contract is placed four years after the entry into force date of chapter 4; the keel of which is laid or which is at a similar stage of construction four years and six months after the entry into force; the delivery of which is after six years and six months after the entry into force; or in cases of the major conversion of a new or existing ship, four years after the entry into force date.

The EEDI is a non-prescriptive, performance-based mechanism that leaves the choice of technologies to use in a specific ship design to the industry. As long as the required energy-efficiency level is attained, ship designers and builders would be free to use the most cost-efficient solutions for the ship to comply with the regulations.

The SEEMP establishes a mechanism for operators to improve the energy efficiency of ships.

The new chapter includes a regulation on Promotion of technical co-operation and transfer of technology relating to the improvement of energy efficiency of ships, which requires Administrations, in co-operation with IMO and other international bodies, to promote and provide, as appropriate, support directly or through IMO to States, especially developing States, that request technical assistance.

It also requires the Administration of a Party to co-operate actively with other Parties, subject to its national laws, regulations and policies, to promote the development and transfer of technology and exchange of information to States, which request technical assistance, particularly developing States, in respect of the implementation of measures to fulfill the requirements of Chapter 4.

The MEPC agreed a work plan to continue the work on energy efficiency measures for ships, to include the development of the EEDI framework for ship types and sizes, and propulsion systems, not covered by the current EEDI requirements and the development of EEDI and SEEMP-related guidelines.

The MEPC agreed to the terms of reference for an intersessional working group on energy efficiency measures for ships, scheduled to take place in February/March 2012, tasked with:

- further improving, with a view to finalization at MEPC 63, draft Guidelines on the method of calculation of the EEDI for new ships; draft Guidelines for the development of a SEEMP; draft Guidelines on Survey and Certification of the EEDI; and draft interim Guidelines for determining minimum propulsion power and speed to enable safe maneuvering in adverse weather conditions;
- considering the development of EEDI frameworks for other ship types and propulsion systems not covered by the draft Guidelines on the method of calculation of the EEDI for new ships;
- identifying the necessity of other guidelines or supporting documents for technical and operational measures;
- considering the EEDI reduction rates for larger tankers and bulk carriers; and
- Considering the improvement of the guidelines on the Ship Energy Efficiency Operational Indicator (EEOI) (MEPC.1/Circ.684).

Ships built after 2015 will have to be 10% more efficient. But developing countries were given an exemption until 2019. These countries had blocked efforts to make the EEDI mandatory last year. Further improvements will come in stages – 20% between 2020 and 2024 and 30% for ships built after 2024. These will have to be achieved according to an Energy Efficiency Design Index (EEDI).

Green groups hailed the agreement but said very few ship builders will apply the 10% efficiency standard from 2015 given that many operate in developing countries.

The Clean Shipping Coalition said that because ships have a typical lifespan of 30 years, it will take a very long time before the standards can have a real impact.

84. Air Pollution Linked To Learning and Memory Problems, Depression

Long-term exposure to air pollution can lead to physical changes in the brain, as well as learning and memory problems and even depression, new research in mice suggests. While other studies have shown the damaging effects of polluted air on the heart and lungs, this is one of the first long-term studies to show the negative impact on the brain, said Laura Fonken, lead author of the study and a doctoral student in neuroscience at Ohio State University. "The results

suggest prolonged exposure to polluted air can have visible, negative effects on the brain, which can lead to a variety of health problems," Fonken said. "This could have important and troubling implications for people who live and work in polluted urban areas around the world."

The study appears online in the journal *Molecular Psychiatry*.

For this study, Fonken and colleagues in Ohio State's Department of Neuroscience collaborated with researchers in the university's Davis Heart and Lung Research Institute.

In previous studies in mice, the Davis research group – including Qinghua Sun, associate professor of environmental health sciences, and Sanjay Rajagopalan, professor of cardiovascular medicine -- found that fine air particulate matter causes widespread inflammation in the body, and can be linked to high blood pressure, diabetes and obesity. This new study aimed to extend their research on air pollution to the brain.

"The more we learn about the health effects of prolonged exposure to air pollution, the more reasons there are to be concerned," said Randy Nelson, co-author of the study and professor of neuroscience and psychology at Ohio State. "This study adds more evidence of pollution's negative effects on health."

In the new study, mice were exposed to either filtered air or polluted air for six hours a day, five days a week for 10 months – nearly half the lifespan of the mice. The polluted air contained fine particulate matter, the kind of pollution created by cars, factories and natural dust. The fine particulates are about 2.5 micrometers in diameter. The concentration of particulate matter that the mice were exposed to was equivalent to what people may be exposed to in some polluted urban areas, according to the researchers.

After 10 months of exposure to the polluted or filtered air, the researchers performed a variety of behavioral tests on the animals. In a learning and memory test, mice were placed in the middle of a brightly lit arena and given two minutes to find an escape hole leading to a dark box where they feel more comfortable. They were given five days of training to locate the escape hole, but the mice who breathed the polluted air took longer to learn where the escape hole was located. The mice exposed to polluted air also were less likely to remember where the escape hole was when tested later.

In another experiment, mice exposed to the polluted air showed more depressive-like behaviors than did the mice that breathed the filtered air. The polluted-air mice showed signs of higher levels of anxiety-like behaviors in one test, but not in another.

But how does air pollution lead to these changes in learning, memory and mood? The researchers did tests on the hippocampal area of the mice brains to find the answers. "We wanted to look carefully at the hippocampus because it is associated with learning, memory and depression," said Fonken, who, along with Nelson, are also members of Ohio State's Institute for Behavioral Medicine Research. Results showed clear physical differences in the hippocampi of the mice who were exposed to polluted air compared to those who weren't. The researchers looked specifically at branches that grow off of nerve cells (or neurons) called dendrites. The dendrites have small projections growing off them called spines, which transmit signals from one neuron to another. Mice exposed to polluted air had fewer spines in parts of the hippocampus, shorter dendrites and overall reduced cell complexity.

"Previous research has shown that these types of changes are linked to decreased learning and memory abilities," said Nelson.

In other studies, several of the co-authors of this study from the Davis research center found that chronic exposure to polluted air leads to widespread inflammation in the body, which is linked to a variety of health problems in humans, including depression. This new study found evidence that this low-grade inflammation is evident in the hippocampus.

In mice that breathed the polluted air, chemical messengers that cause inflammation – called pro-inflammatory cytokines – were more active in the hippocampus than they were in mice who breathed the filtered air. "The hippocampus is particularly sensitive to damage caused by inflammation," Fonken said. "We suspect that the systemic inflammation caused by breathing polluted air is being communicated to the central nervous system."

The research was supported by grants from the National Institutes of Health. Other co-authors, all from Ohio State, included Qinghua Sun, associate professor of environmental health sciences; Sanjay Rajagopalan, professor of cardiovascular medicine; Xiaohua Xu, in environmental health sciences; Zachary Weil, in neuroscience and psychology; and Guohua Chen, in the Davis Heart and Lung Research Institute.

85. IEA Trims 2011 Crude Oil Demand Outlook

The International Energy Agency has lowered its forecast of worldwide oil demand by 60,000 b/d for 2011 to average 89.5 million b/d and raised its 2012 outlook by 70,000 b/d. Adjustments to this year's forecast stem largely from lower-than-expected demand in the second and third quarters, which has been pressured by high prices and increased evidence of slowing economic growth, the agency reported in its Oil Market Report for August. Weaker demand in the US and China drove the adjustment. China's monthly apparent demand contracted by 1.5% in June from a year earlier, as refinery runs eased and gas oil posted a sharp slowdown in demand growth.

IEA also revised downward its estimate of 2010 demand by 50,000 b/d to 88.3 million b/d such that global oil demand growth for this year is about 1.2 million b/d, unchanged from its previous report.

The new, stronger outlook for 2012 is due to higher expectations for oil-fired power generation in Japan, which will push global oil demand to an annual average of 91.1 million b/d. IEA notes that its forecast is based on International Monetary Fund assumptions of global economic growth of 4.2% in 2011 and 4.4% in 2012 and that these assumptions may ultimately prove too optimistic. Employing an assumption of 2.8% economic growth in 2011, IEA sees worldwide oil demand averaging 89.1 million b/d this year. And assuming 3% economic growth in 2012 yields an average oil demand forecast of 89.8 million b/d, the agency reported.

Such an outcome could conceivably push the call on OPEC crude and stock change below 30 million b/d, all other things being equal, IEA said.

Oil supply from the Organization of Petroleum Exporting Countries climbed 115,000 b/d in July to 30.05 million b/d, largely due to Saudi Arabia's effort to replace lost Libyan supplies. IEA noted that Saudi Arabia boosted its production in July to a 30-year high of 9.8 million b/d, and a sharp uptick in output by Angola helped offset declines in Iran, Iraq, Ecuador, Nigeria, and Libya.

Non-OPEC oil supply increased by 400,000 b/d in July to average 52.7 million b/d. Production in the second half of this year will likely climb 1 million b/d higher than in the first half, IEA said, as temporary shut-ins recede notably in Yemen, UK, and Canada and as new fields come on stream in Brazil, Canada, and Australia.

The agency forecasts that 2012 non-OPEC supply will average 54 million b/d, a 100,000 b/d downward revision from its previous outlook, compared to last year's 53 million b/d. IEA expects incremental supply next year from Brazil, Canada, Australia, the former Soviet Union, China, and global biofuels.

In contrast to previous years, oil production among European members of the Organization for Economic Cooperation and Development could stay flat year-on-year, as North Sea production experiences a minor uptick with a handful of new fields coming online, the report said.

86. Climate Scientists Shine New Light on Methane Mystery

Atmospheric levels of methane, 20 times more powerful than carbon dioxide (CO₂) at trapping heat, stayed steady for two decades to 2006 on wider fertilizer use to grow rice or a surge in natural gas demand, according to two separate studies in the journal *Nature*. Climate researcher Fuu Ming Kai from the Massachusetts Institute of Technology's Singapore research center said in one study that methane output from rice fields in the Northern Hemisphere dropped during the period as fertilizers replaced manure and because of reduced water use. In the second study, Murat Aydin at the University of California, Irvine, concluded that a drop in methane emissions from more efficient burning of fossil fuels and a surge in natural gas demand.

The studies aim to solve a puzzle that has confounded climate scientists for years: why did methane levels in the atmosphere, after rising steadily for many years, taper off in the mid-1980s in a dip lasting two decades? Solving the puzzle is crucial because methane levels have risen more than 150 percent since the start of the industrial revolution, compared with CO₂'s 40 percent increase, and are on the rise again.

While the studies reach different conclusions, both studies point to human activities as the reason for the slowdown. The main methane sources come from burning fossil fuels, rice paddies, coal mines, livestock and clearing and burning of tropical forests. Fuu said long-term data and comparing methane levels between the both hemispheres helped researchers conclude that about half the decrease in Northern Hemisphere methane emissions could be explained by reduced emissions from rice agriculture in Asia over the past three decades.

Aydin concluded the drop coincided with rapid natural gas production as the fuel became increasingly price competitive with oil and other fossil fuel, instead of flaring it off. The gains came even though overall fossil fuel use increased as cleaner burning technologies helped keep methane emissions in check, he said. "We speculate that the rising economic value of natural gas during the late 20th Century and the deployment of cleaner technologies led to sharp reductions in the release of light hydrocarbons into the atmosphere," the study says.

87. Himalaya Glaciers Shrinking On Global Warming, Some May Disappear

Three Himalaya glaciers have been shrinking over the last 40 years due to global warming and two of them, located in humid regions and on lower altitudes in central and east Nepal, may disappear, researchers in Japan said recently.

Using global positioning system and simulation models, they found that the shrinkage of two of the glaciers -- Yala in central and AX010 in eastern Nepal -- had accelerated in the past 10 years compared with the 1970s and 1980s.

Yala's mass shrank by 0.8 and AX010 by 0.81 meters respectively per year in the 2000s, up from 0.68 and 0.72 meters per year between 1970 and 1990, said Koji Fujita at the Graduate School of Environmental Studies in Nagoya University in Japan.

"For Yala and AX, these regions showed significant warming ... that's why the rate of shrinking was accelerated," Fujita told reporters. "Yala and AX will disappear but we are not sure when. To know when, we have to calculate using another simulation (model) and take into account the glacial flow," Fujita said, but added that his team did not have the data to do so at the moment.

Their findings were published in the journal Proceedings of the National Academy of Sciences.

The Himalayas is an enormous mountain range consisting of about 15,000 glaciers and some of the world's highest peaks, including the 8,848-meter-high Mount Everest and K2.

Apart from climate change and humidity, elevation also appears to play a critical role in the lifespan of glaciers, which are large persistent bodies of ice. The Rikha Samba glacier in the drier region of west Nepal has also been getting smaller since the 1970s, but its rate of shrinking slowed to 0.48 meters per year in the past 10 years compared to 0.57 meters per year in the 1970s and 1980s. This was because the 5,700-meter-high glacier was located on a higher altitude, which meant that losses in mass from melting could be compensated at least partly by collection of snowfall, Fujita said.

"In the case of Yala and AX, they are situated on lower elevation (altitudes), therefore shrinkage was accelerated. Glaciers that have no chance to get snow mass will eventually disappear," Fujita said. Yala glacier is located about 5,400 meters above the sea level, while AX is 5,200 meters high.

88. Diesel Fumes Pose Risk to Heart as Well as Lungs, Study Shows

Tiny chemical particles emitted by diesel exhaust fumes could raise the risk of heart attacks, research has shown. Scientists have found that ultrafine particles produced when diesel burns are harmful to blood vessels and can increase the chances of blood clots forming in arteries, leading to a heart attack or stroke.

The research by the University of Edinburgh measured the impact of diesel exhaust fumes on healthy volunteers at levels that would be found in heavily polluted cities. Scientists compared how people reacted to the gases found in diesel fumes -- such as carbon monoxide and nitrogen dioxide -- with those caused by the ultrafine chemical particles from exhausts. The research, funded by the British Heart Foundation, showed that the tiny particles, and not the gases, impaired the function of blood vessels that control how blood is channeled to the body's organs.

The 'invisible' particles -- less than a millionth of a meter wide -- can be filtered out of exhaust emissions by fitting special particle traps to vehicles. Particle traps are already being fitted retrospectively to public transport vehicles in the US to minimize the potential effects of pollution.

The results are published in the European Heart Journal.²

Dr Mark Miller, of the University of Edinburgh's Centre for Cardiovascular Science, said: "While many people tend to think of the effects of air pollution in terms of damage to the lungs, there is strong evidence that it has an impact on the heart and blood vessels as well. "Our research shows that while both gases and particles can affect our blood pressure, it is actually the miniscule chemical particles that are emitted by car exhausts that are really harmful. "These particles produce highly reactive molecules called free radicals that can injure our blood vessels and lead to vascular disease.

"We are now investigating which of the chemicals carried by these particles cause these harmful actions, so that in the future we can try and remove these chemicals, and prevent the health effects of vehicle emissions"

Researchers want environmental health measures that are designed to reduce emissions to be tested to determine whether they reduce the incidence of heart attacks.

Professor Jeremy Pearson, Associate Medical Director at the British Heart Foundation, said: "We've known for a long time that air pollution is a major heart health issue and that's why we're funding this team in Edinburgh to continue their vital research. Their findings suggest that lives could be saved by cutting these harmful nanoparticles out of exhaust -- perhaps by taking them out of the fuel, or making manufacturers add gadgets to their vehicles that can trap particles before they escape. The best approach isn't clear yet.

"For now our advice remains the same -- people with heart disease should avoid spending long periods outside in areas where traffic pollution is likely to be high, such as on or near busy roads."

89. Poorer Countries Lead Global Movement Toward Low-Carbon Power

Poor countries have spent just as much as rich ones -- and in the case of China, more -- to develop low-carbon energy, according to a study coming out this week. Its conclusions could turn the conventional wisdom about the differences among nations over mitigation efforts on its head.

The report by former World Bank economist David Wheeler, who now leads the climate change division at the think tank Center for Global Development, finds that China spent 94 cents of every \$10,000 of average income on clean energy between 1990 and 2008. The United States, by contrast, spent 44 cents of every \$10,000.

Meanwhile, all other industrialized countries combined spent only a penny more per year than their less developed counterparts.

"We all had this idea that [climate change] was a rich country problem and that poor countries shouldn't have to do anything until they get to a certain stage of development, and that rich countries need to make it worth their while. But what I had seen suggested [was] that poor countries were already doing a lot," Wheeler said.

² Nicholas L. Mills et al. Combustion-derived nanoparticulate induces the adverse vascular effects of diesel exhaust inhalation. European Heart Journal, July 13, 2011 DOI:10.1093/eurheartj/ehr195

The data bore that out. Wheeler examined International Energy Agency data for 174 countries on investments in six low-carbon power sources (hydro, geothermal, nuclear, biomass, wind and solar) to find the incremental costs of clean power compared to a cheaper, carbon-intensive option like a conventional coal-fired power plant. He then computed the average income share in countries X to compare how much people in poor countries are paying for carbon mitigation compared to those in rich nations.

"Lo and behold, you get a world in which the shares that poor countries have been devoting to low-carbon technologies over the past 18 years is really comparable to the rich countries," Wheeler said.

The study comes as countries continue to debate whether to develop a new international climate change treaty. Developing countries, which currently are not obligated to curb emissions, have long argued that they should not be required to help solve a problem caused by industrialized nations.

Many maintain that they also have "atmospheric rights" -- that is, the right to pollute -- in order to develop. Wealthy countries, meanwhile, argue that fast-growing developing countries like China and India are not doing enough to mitigate emissions. U.S. lawmakers in particular have argued that cutting carbon would put America at a competitive disadvantage to China.

Developing nations attracted to hydropower

But the fact is countries are working steadily to develop clean energy. And, Wheeler's study argues, they've been doing so for a long time.

Since 1990, developing countries have accounted for 55 percent of the global increase in low-carbon energy generation, he found. China accounted for 15 percent of it alone.

In fact, because of the growth of hydroelectric generation in particular, developing nations like the Kyrgyz Republic, Bhutan, Mozambique, Paraguay and Zimbabwe crowd out the few top-spending developed countries like Iceland, Germany and Finland.

Tajikistan actually tops the list, spending \$12.27 for the incremental costs of clean energy for every \$10,000. But Wheeler noted that might be an anomaly because the country underwent a civil war. A push in hydro development in 1992-1993 might have been a restart of war-idled energy capacity rather than new development, he noted.

Iceland is the only high-income country in the top X 10 list. With a gross domestic product per capita of \$29,752, the country spends \$11.56 per person annually -- mostly on geothermal power.

But the Kyrgyz Republic, with a per capita GDP of just \$1,634, has spent only slightly less -- \$11.22 per person.

Wheeler said he purposely included the controversial energy sources hydro and nuclear. While environmental groups fighting for action on climate change don't like to include those options, Wheeler said he felt it was important to look simply at what sources produce low or zero emissions. At the same time, he argued, despite the safety risks and environmental hazards posed by nuclear and large hydro, respectively, the climate would be in far worse condition had countries not developed those sources.

"They're a huge part of this story," Wheeler said. "If poor countries hadn't gone down that road, our carbon emissions would be now far higher than they are, and it would be growing every day much worse than it is." He also didn't try to tease out a country's motive for developing low-carbon energy, since in virtually every case, it had little or nothing to do with climate change.

90. MTU Showcases Future Engines For Agricultural Machinery at Agritechnica

At this year's Agritechnica agricultural machinery exhibition, Tognum will be showcasing its MTU brand agricultural engines designed to meet EU Stage IV and US EPA Tier 4 final emissions regulations scheduled for introduction in 2014. The newly-developed Series 1000, 1100, 1300 and 1500 engines meet the upcoming emissions limits using SCR exhaust aftertreatment technology only and will need no diesel particulate filters. The units cover the sub-560 kW power range. From 2014, Series 1600 agricultural engines which need neither SCR systems nor diesel particulate filters will be introduced to extend the range to 730 kW. The agricultural machinery exhibition takes place from 15 to 19 November in Hanover.

From 2014, MTU will be introducing its new Series 1000, 1100, 1300 and 1500 engines with outputs ranging from 100 to 460 kW. These units have been specially developed for off-highway applications in the construction, industrial and agricultural sectors and are based on Daimler technology. They will utilize an SCR exhaust aftertreatment system to achieve compliance with the limits set by EU Stage IV and EPA Tier 4 final for nitrogen oxides and particulate emissions. However, **the units do not need diesel particulate filters** and therefore allegedly offer significant benefits in terms of installation space and weight. Compared with units designed for EU Stage IIIB or EPA Tier 4 interim, customers for the new MTU engines will benefit from reductions of up to 5% in fuel consumption, an increase in service life of up to 20%, higher torque at lower engine speeds, greater engine brake power and fast, straightforward maintenance.

From 2014, the program will be extended to 730 kW with the introduction of Series 1600 engines. These off-highway units can be used in forage harvesters and other agricultural vehicles and machines with high power requirements. They meet EPA Tier 4 final specifications using in-engine technologies involving exhaust recirculation and diesel oxidation catalysts. MTU placed particular emphasis on optimizing the combustion process in order to minimize fuel consumption. Overall, customers will benefit from an integrated system with low conversion and operating costs.