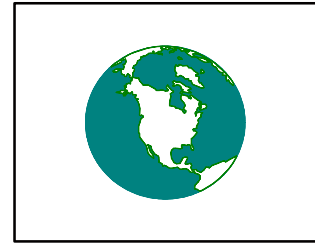


Michael P. Walsh
3105 N. Dinwiddie Street
Arlington, Virginia 22207
USA
Phone: (703) 241 1297 Fax: (703) 241 1418
E-Mail mpwalsh@igc.org
<http://walshcarlines.com>



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Table of Contents

EUROPE.....	3
1. Poland Issues Draft Document Setting Environmental Priorities Through 2010.....	3
2. Carmakers Say Crisis Complicates EU CO2 Compliance	3
3. EU Member States Close to Agreeing Slower CO2 Curbs; But Parliament?	4
4. Spain's Road Transport Emissions Fall In 2008	4
5. Spain to Develop Monitoring System to Examine Climate Change, Health Impacts	5
6. EU Lawmakers Detail Ground Rules for Mandatory Emission-Reduction Goals.....	5
7. Panel Says U.K. Needs to Cut Greenhouse Gas Emissions By 80 Percent In 2050	6
8. EU Lawmakers Give Boost to Green Vehicles	7
9. France to Spend 400 Million Euros to Support Design of Ultra-Low Carbon Cars	7
10. Spain and Renault Study Electric Car Plan.....	8
11. EU Clears French Aid to Hydrogen Project.....	9
12. Mitsubishi Motors Set to Test Electric Cars in Europe	9
13. Council Approves EU Airline Carbon Trade Deal.....	10
14. EU to Urge Other States to Curb Aviation Emissions.....	10
15. EU Commission Seeks Advice on Monitoring Aviation Emissions	11
16. Next U.S. President Should Commit To New Climate Deal, European Official Says	11
17. EU Pushing Emissions Limit for Power Plants; Seeks More Carbon Storage	12
18. Sweden to End Green Car Rebate Six Months Early.....	13
19. EU Ministers Agree on Plan to Let States Impose Environmental Levies on Freight.....	14
20. Train Maker Says Rail Cleaner Than Air Travel, Seeks More EU Support.....	15
21. Lawmakers Overhaul Draft EU Law On Use of Biofuels, Renewable Energy	15
22. Exhaust Fumes Growing Problem for Czechs	17
23. Impacts of Climate Change in Europe	18
24. London Mayor Proposes Climate Strategy to Address Increased Risks	18
25. Honda Banks on Hybrids, Russia for Big Europe Push.....	19
26. Plug-In Hybrid Car Launched In the UK.....	21

27.	Hydrogen Cars Added to EU Vehicle Approval System	21
NORTH AMERICA		21
28.	ARB Publishes Draft Regulations for In-Use Heavy-Duty Trucks	21
29.	Southern California Ports Clean Up Polluting Trucks	23
30.	New Study Says Air Pollution Takes 2 Months off Mexicans' Lives	23
31.	Obama Said Ready to Declare Carbon Dioxide Dangerous Pollutant	24
32.	California to Host Global Summit of State, Provincial Leaders in November	25
33.	'Hydrogen Cities' Seen Driving Fuel Cell Adoption	25
34.	GE Stepping Up Push for Battery-Powered Cars	26
35.	Appellate Panel Hears Arguments on Soot Rule	26
36.	EPA Tightens Lawn Mower, Motor Boat Emission Rules	27
37.	Affordable Electric Cars Said to be Many Years Away	28
38.	New York Yellow Cab Owners Sue Over Green Plan	29
ASIA-PACIFIC		30
39.	Beijing City Raises Pump Prices to Fund Cleaner Fuel	30
40.	West Told By China To Keep Its Promises on Technology Transfer	31
41.	China Wants Quicker Action By West Before Agreement on 2050 Emissions Cuts	31
42.	Japan's Trade Ministry to Subsidize Purchases of Solar Power Generators	33
43.	Japanese METI Seeks Subsidies, Tax Breaks to Cut Carbon Emissions	33
44.	China Appears to Tilt Away From Diesels Toward Hybrids	34
45.	China Said To Take Concrete Measures on Climate Change and Air Pollution	34
46.	Beijing Returns to Congested Normal after Olympics	35
47.	Higher Risk of Death for Hong Kong's Poor on Bad Air Days	36
SOUTH AMERICA		36
48.	Brazil OK's Euro-5 Diesel Starting 2012; Tightens Truck Requirements	36
49.	New Ecuador Constitution Includes Provisions to Protect Environment	36
50.	Venezuela Offers Natural Gas Vehicles for Older Cars	37
51.	Peru Issues New Air Quality Standards, Plans to Enforce Biodiesel Requirement	37
CENTRAL AMERICA		38
52.	Panama Will Join Regional Effort to Monitor Air Pollution	38
AFRICA		39
53.	East African Countries Adopt Regional Framework Agreement on Air Pollution	39
GENERAL		39
54.	IMO Panel Sets Limits on Ships' Sulfur, Nitrogen Oxide Emissions	39
55.	WHO Says Post-Kyoto Framework Should Address Health Issues	41
56.	Study Finds Link Between Traffic Related Air Pollution and Perinatal Mortality	41
57.	Global Carbon Emissions Soar	42
58.	Gasoline Report Card Shows Leaded Era is Approaching the End	43
59.	IPCC Elects New Board, Adopts Program for Next Assessment Report	44
60.	Arctic Sea Ice Reaches Second-Lowest Level Since 1970s	45
61.	WMO Says Antarctic Ozone Hole Already Larger Than in 2007	45
62.	Asian Pollution Could Spur US, European Warming	46
63.	Experts Says Arctic Melting Shows Global Warming Serious	46

EUROPE

1. Poland Issues Draft Document Setting Environmental Priorities Through 2010

Poland has unveiled its draft of environmental priorities the government will seek to implement through 2010, with "prospects" to 2014. The 39-page draft is slated for approval by the Parliament in November according to Elzbieta Strucka, spokeswoman for the Environment Ministry. The draft was released a year later than required under law.

Referring to the Clean Air for Europe (CAFE) program launched by the European Commission in 2001, the draft said Poland identified 161 zones in the country which do not meet the air quality standards. The draft said the European Commission's proposed climate package, which would require member states by 2020 to cut greenhouse gas emissions by 20 percent and to increase the proportion of electricity from green sources, will help to improve air quality in Poland's most polluted zones.

2. Carmakers Say Crisis Complicates EU CO2 Compliance

Global automakers are urging European authorities to reconsider proposed limits on carbon dioxide (CO2) emissions from cars, arguing the current financial crisis is going to make it even harder to meet them. "You can't pile on regulation on an industry during its worst time in the last 10 years," Fiat Chief Executive Sergio Marchionne told reporters while visiting the Paris Auto Show. "It's nonsense."

The financial crisis is expected to worsen an already bad situation for US and European car makers, which have seen sales plummet in recent months. Drivers are postponing making big purchases because of inflation, high fuel prices, and credit difficulties.

Carmakers have long been critical of the proposal from the European Commission to cap emissions at 130 grams per kilometer per vehicle by 2012. They say it would cost them too much money to upgrade the technology under the hood in such a short period of time.

Speaking at the Reuters Auto Summit on the eve of the auto show, Renault Executive Vice President Patrick Pelata said the additional cost would be enough to turn off buyers.

Thierry Dombreval, chief operating officer at Toyota Motor Europe also said extra costs could further depress sales. Some politicians in Germany, home to big car makers like Mercedes, estimate it could cost billions of Euros of export earnings and thousands of jobs.

Fiat's Marchionne said the commission ought to think about giving the region's car industry 40 billion Euros (US\$55 billion) in loans to help it develop the greener technology that it expects from them -- just like the US\$25 billion in loans the United States has decided to make available to its automakers.

France, which has the rotating presidency of the European Union, has proposed phasing in the limits up to 2015, with lower fines for car makers that narrowly miss the target.

At an unveiling ceremony at the Opel stand at the auto show, General Motors President Carl-Peter Forster called for the deadline to be staggered from 2012 to 2015. He also wants tax

breaks and other incentives for more fuel-efficient cars. Most of all, he wanted a decision to be made quickly.

While concerned about the cost implications, Renault's Pelata did not seem as concerned about meeting the compliance deadline. "We are not worried about 2012 ... we are on track," he said, noting that Renault's fleet was already near the limit. In the first half of the year, it had an average emission of 141 g/km. In the race to prove its green credentials, Renault was aiming to introduce an electric car with a sales target of up to 40,000 by 2011, he added.

The average CO2 emission from a car in the EU is 158 g/km.

3. EU Member States Close to Agreeing Slower CO2 Curbs; But Parliament?

Italy is close to backing a French plan to phase in European Union curbs on greenhouse gas emissions from cars by 2015, leading to a united front among car-making nations, according to sources in the talks. The deal would delay full introduction of the European Commission's proposed limits by three years and lower the punishment for non-compliance.

"Italy is now ready for a compromise on the basis of the French proposal," said German Conservative lawmaker Werner Langen, who is representing the European Parliament in the negotiations.

The backing of Italy, home to carmaker Fiat and its luxury Ferrari division, would create a united front with France and Germany, which have already reached an informal accord.

Italy, which specializes in lighter, less polluting cars, had previously complained that France and Germany were dominating the negotiations and bending draft rules to favor their heavier marquees such as BMW and PSA Peugeot Citroen.

An Italian government source told the press: "The French proposal contains all the elements to reach agreement, but we're not there yet." Last month, France proposed phasing in CO2 cuts by 2015, with a banded system of fines including low penalties for manufacturers that just miss their targets. The source said Italy wanted the fines for those that narrowly miss their targets to be reduced further to 15 Euros per gram of CO2, compared to 25 Euros proposed by France.

"It is impossible to predict how successful different car models will be each year -- you might sell more big cars if that model is especially successful -- so penalties should not be high for producers close to their targets," said the source.

Any agreement among member states would still face a hurdle winning approval from EU lawmakers before it is adopted. The environment committee of the European Parliament, which shares legislative power with member states, last month rejected a similar swathe of changes to those proposed by France, saying they were too soft on the auto industry.

4. Spain's Road Transport Emissions Fall In 2008

Carbon emissions from the Spanish road transport sector fell by 4.6 per cent in the first quarter of the year compared to the same period in 2007, according to WWF. Emissions also fell in the second quarter. The decline is due to rising fuel prices, the group says. Prices are now falling but WWF believes emissions will continue to decline as the economic crisis deepens. Road transport emissions have steadily risen in Spain between 1990 and 2006.

5. Spain to Develop Monitoring System to Examine Climate Change, Health Impacts

In what he called a matter of preventive health policy, on October 6th, Spain's health minister announced the creation of a national observatory to monitor and to address the effects of climate change on human health. According to Health and Consumer Affairs Minister Bernat Soria, the National Climate Change and Health Observatory planned for 2009 will act as a clearinghouse for research projects, serve as a “diagnostic instrument” for determining the health effects of climate change, and facilitate the policymaking process.

The observatory will be available to the different divisions of the central government as well as to regional autonomous community and municipal governments, professional organizations, and nongovernmental organizations interested in climate change.

Pointing to the ongoing need for emissions reductions and sustainable development, Soria said his ministry will aim to “maximize synergies” arising from other plans related to issues such as the effects of extreme temperatures, water quality, chemical safety, atmospheric contamination, epidemiological monitoring, and health care training.

As a result of climate change, Spain is expecting that a growing number of heat waves will pose a serious threat to an aging population. Likewise, the spread and adaptation of subtropical organisms may spread diseases such as dengue fever, West Nile fever, malaria, Chikungunya, and encephalitis.

Soria said facing the international health threats caused by climate change must include both investments to avoid such epidemics and a search for ways to “adapt to the unavoidable.”

The Health Ministry and the Ministry of the Environment, Rural, and Marine Affairs are developing the National Healthcare and Environment Action Plan 2009–2012, which includes climate change among its main lines of action.

6. EU Lawmakers Detail Ground Rules for Mandatory Emission-Reduction Goals

On October 7th, EU lawmakers gave their backing to two draft laws detailing how the European Union will reduce its greenhouse gas output by a mandatory 20 percent below 1990 levels by 2020. The laws are targeted at EU member states and at heavy industry that participates in the EU Emission Trading Scheme (ETS) and they set out the reductions that each must achieve as a contribution to the 20 percent target. In particular, the drafts adopted by lawmakers in the European Parliament's Environment Committee set out potentially heavy fines for EU countries that miss their targets and add long-term, emissions-reduction goals to the existing 20 percent target.

Lawmakers voted 46–20 for the first proposal, to revise the ETS after 2012, and 66–1 for the second proposal, which gives each member state an emissions cap to be reached through policies aimed at non-ETS sectors such as transportation, construction, and agriculture.

Before being adopted into EU law, the draft legislative texts must be approved by a vote of the full European Parliament and then must be negotiated with EU member states represented in the EU Council, currently headed by France, which holds the rotating presidency of the EU through December 31st.

The ETS proposal sets out the ground rules for the third phase of the EU cap-and-trade system, which will run from 2013–2020.

Heavy industries such as steelmakers or cement plants taking part in the ETS would be required to reduce their emissions 21 percent by 2020 compared to 2005. At the same time, auctioning of emissions allowances would become the norm, compared to the current situation in which most are given to participants for free.

Power generators will be required to buy all allowances at auction starting in 2013, as a way of preventing windfall profits, which the power sector earned in the past by passing on to its customers the nominal costs of freely allocated allowances.

On exemptions for small emitters, lawmakers said that industrial plants with annual emissions of less than 25,000 metric tons of carbon dioxide-equivalent should not be required to participate in the ETS, compared to the cutoff point proposed by the Commission of 10,000 tons.

Lawmakers also agreed to adopt long-term, emissions-reduction targets for the European Union of 50 percent by 2035 and 60 percent to 80 percent by 2050, both compared to 1990 levels.

Under the draft adopted by the Environment Committee, a fine of €100 (\$136) per excess ton of carbon dioxide would be levied, and member states would be further penalized by a reduction in the number of allowances they can give to their ETS sectors, and by additional emission-reduction penalties for subsequent years. But member states that reduce emissions more than expected would be able to sell excess allowances to other countries.

On the use of CDM credits by member states to offset the emissions of non-ETS sectors, lawmakers agreed to a limit equivalent to 1 percent of emissions in the period 2013–2020, whereas the Commission had put forward a limit of 3 percent per year, with no carry-over of credits from one year to another.

The European Commission welcomed the votes, saying that lawmakers had adopted a position that would strengthen the European Union's negotiating hand in international climate talks to find a successor to the Kyoto Protocol. Environment Commissioner Stavros Dimas said in a statement that progress on the EU climate legislation “sets an example which our international partners are watching closely, and each step towards finalizing it is important.”

7. Panel Says U.K. Needs to Cut Greenhouse Gas Emissions By 80 Percent In 2050

By 2050, the United Kingdom must reduce its greenhouse gas emissions at least 80 percent below 1990 levels if it wants to contribute to a global deal that halves current atmospheric levels of greenhouse gases by mid-century, a government advisory committee said on October 6th. In a letter to newly appointed Secretary of State for Energy and Climate Change Ed Miliband, the Committee on Climate Change (CCC) said the 80 percent target should apply across all sectors of the U.K. economy, including international aviation and shipping, which currently are excluded from targets.

The CCC, an independent body established to advise the government on the country's carbon budgets for the period to 2050, said the new targets—up from a previous goal to cut emissions by 60 percent—could be achieved at an affordable cost of between 1 percent and 2 percent of gross domestic product in 2050.

Warning against inaction, the CCC's chair, Lord Adair Turner, said in a prepared statement that using energy more efficiently "makes economic as well as environmental sense: Many of the changes needed will not cost but save money." He added that "overall, the cost to the U.K. of meeting our proposed targets will be affordable and very small compared with the potential consequences and costs of inaction."

The CCC argued in its interim advice letter that the 60 percent target the government set in 2000 on the advice of the Royal Commission on Environmental Pollution is no longer sufficient. It based its advice on new scientific evidence of the dangers of climate change, including faster than expected melting of the summer Arctic Sea ice, the realization that atmospheric pollution has masked some of the warming that has occurred since 2000, and higher than anticipated global emission trends.

International aviation and shipping should be included in the country's climate change strategy, if not in the current climate change bill due for approval in the 2008–2009 session of Parliament, the committee said. Anticipating that aviation and shipping emissions would not fall sufficiently by 2050, the CCC said these sectors should have to purchase credits and that all other sectors covered by the Climate Bill should work to make up the difference by raising their reduction levels beyond the 80 percent target.

Among a series of recommendations to reduce emissions for the period to 2020, the CCC recommended that the transport sector should improve the fuel efficiency of conventional engines, increase the use of sustainable first generation biofuels, and introduce new technologies like electric cars, plug in hybrids, and hydrogen vehicles.

The CCC will provide more detail of the U.K.'s first three carbon budgets as part of its full inaugural report, *Building a Low-Carbon Economy in the UK, the 2008–2022 Budgets and 2050 Target*, scheduled for release on Dec. 1.

8. EU Lawmakers Give Boost to Green Vehicles

Europe's local authorities and bus companies will have to buy greener, more fuel-efficient vehicles in future, following a vote by European Union lawmakers. The move is expected to boost eco-friendly vehicles by increasing their share of local governments' annual demand for around 110,000 cars, 110,000 vans, 35,000 trucks and 17,000 buses in the EU.

Lawmakers adopted proposals forcing local governments to look at the environmental impacts, and not just the price, when buying vehicles. But they allowed opt-outs for heavy machinery, such as military vehicles, quarry trucks and fire engines.

The EU executive said the move would reduce the consumption of petrol and diesel as well as help the bloc achieve its ambitious goals of cutting carbon dioxide emissions by a fifth by 2020. It also said the legislation would encourage green technologies by helping them gain economies of scale, which in turn can drive down prices for consumers.

The proposals were adopted with 641 votes in favor and 37 against, and are expected to be swiftly approved by member states.

9. France to Spend 400 Million Euros to Support Design of Ultra-Low Carbon Cars

France will create a four-year, €400 million (\$545 million) plan to fund research and development of ultra-low carbon vehicles, French President Nicolas Sarkozy said on October 9th in a speech to automakers at the Paris World Auto Show. The president said the credits, already available under two programs, should allow French manufacturers to be more competitive in building these cars and to help in meeting European carbon dioxide emissions targets.

Sarkozy also called for a European plan for low-cost loans to auto manufacturers to fund development. He said he is determined to keep the French auto industry alive and thriving, noting it employs nearly 2.5 million, including parts manufacturers and other suppliers, "some 10 percent of the working population."

In a statement, Greenpeace France immediately accused Sarkozy of talking out of both sides of his mouth, depending on his audience. "When it comes to the environment, the president...talks with noble-sounding words at the auto show, but his actual practice is deplorable," said Anne Valette of Greenpeace France. "He pretends to want to develop [clean] cars, but at Brussels in negotiations on [European Union] legislation on CO2 emissions of automobiles, he defends the objectives of the discount."

Sarkozy said that "France will continue to support an ambitious agreement on the environment, that is, an agreement that will allow reducing emissions significantly by 2012, compared with emissions today, and that will lead after 2020 to another cut in emissions." However, "An agreement has to be made with all the partners," Sarkozy said. "No agreement at all would be the most unfavorable thing, so we have to negotiate."

The president said the auto industry is at a "historic turning point in the mode of vehicle propulsion." He said the soaring cost of fuel and extraordinary progress in battery technology, plus a collective realization of the stakes of climate change, mean the end of the internal combustion engine may be in sight. He predicted, "In three years no auto manufacturer will be able to lack a de-carbonized vehicle." As proof, he said the French energy company EDF has signed agreements with automakers Renault and Peugeot-Citroen to collaborate on developing an electric vehicle.

To ensure that new "de-carbonized" vehicles have a market, he said France will extend the top bonus of €5,000 (\$6,814) available in its "bonus-malus" program to light vehicles emitting under 60 grams of carbon dioxide per kilometer and will extend the offer to 2012. Introduced last year, the bonus-malus system offers buyers of low-emissions cars bonuses as high as €5,000 (\$6,814), while buyers of high carbon dioxide emitting vehicles can get assessed one-time taxes ranging as high as €2,600 (\$3,544). Sarkozy said the program, which he said would be extended intact to 2009, had proven a huge success, boosting sales of cars qualifying for bonuses by 50 percent in the first half of 2008.

10. Spain and Renault Study Electric Car Plan

Renault and the Spanish government are studying the introduction of fully electric cars on its roads within three years, Industry Minister Miguel Sebastian said in a press interview. "We are going to put together a working group before February to study a medium- to long-term plan to develop an electric car in Spain with Renault as a main player," Sebastian said. The government hopes 1 million electric cars will be on Spanish streets by 2011, he said.

Sebastian said the country's electricity producers had also expressed interest in the plan, following news that French power utility EDF had signed a deal with Renault to develop a large scale electric car project, starting in France. The plan would be a boon for an industry that saw sales tumble 32 percent in September during a sharp economic downturn, resulting in large-scale layoffs, and which is under pressure to address environmental concerns, he said.

Several European countries are developing projects to introduce electric cars.

Renault sees demand for as many as 50,000 electric vehicles in 2011, the year the carmaker will begin selling zero emission cars in Denmark, Israel and Portugal. Renault is to produce a car for those markets, known as the 'Fluence', based on its mid-sized Megane model, and will eventually offer a full family of electric vehicles.

The French carmaker says taking into account carbon dioxide produced to charge the battery, CO2 emissions would be at worst 60g per kilometer versus an average of 158g/km for European carmakers.

11. EU Clears French Aid to Hydrogen Project

A French government-aided project to develop hydrogen power for vehicles has won European Union backing. The European Commission said it approved 68 million Euros (US\$92.7 million) of French state aid to Air Liquide and 17 other companies in the H2E venture, which are looking at innovations in the market for hydrogen energy, such as producing hydrogen from water and developing hydrogen fuel cells to power vehicles.

"Market failures exist in every segment of the hydrogen energy chain -- production, storage and distribution -- where companies are reluctant to invest because of the high risks in a yet undeveloped market," the European Commission said in a statement. "When the market is unable to trigger R&D (research and development) activity, well targeted state aid can create the right incentives," it added.

12. Mitsubishi Motors Set to Test Electric Cars in Europe

Japan's Mitsubishi Motors Corp said it will begin testing its electric cars in Europe next month as it aims to beat rivals to the uncharted market and promote itself as the pioneer of the zero-emission vehicles.

Competitors such as General Motors Corp and the Renault-Nissan alliance have been winning the publicity game with promises to be the first mass producers of electric cars, but Mitsubishi Motors has the advantage of being the only mass-production carmaker with a working model being tested on the road today: the four-seater i-MiEV hatchback.

While best known for its 4X4s and sports cars, Mitsubishi Motors is already testing a fleet of more than 40 i-MiEVs in Japan, with similar plans for California from around 2010.

Offering test drives to journalists in Europe for the first time during the Paris auto show, Mitsubishi Motors said it hoped to use the test fleet to fuel discussions with European governments and power companies to help electric cars proliferate after the industry's failed attempts in the past.

"We want to be first to the market, but more importantly, we need the infrastructure and standards to help electric cars enter the mainstream," said Shinichi Kurihara, corporate general manager in charge of Mitsubishi's product strategy.

With 200 kg worth of lithium-ion battery packs tucked under the floor for stability and the electric motor in the rear, i-MiEV offers a zippy ride, navigating easily through the crowded streets of Paris. Acceleration is also reportedly superior to an internal combustion engine thanks to a high-performance motor that generates high torque from a low speed.

The i-MiEV, based on Mitsubishi's "i" gasoline-engine minicar sold only in Japan, has a cruising distance of 144 km (89.5 miles) measured by European standards on a full battery and a top speed of 130 km (80 miles) an hour. Charging takes about seven hours using a 200-Volt outlet, but with quick-charger stations that could be reduced to less than an hour.

Even accounting for the carbon dioxide produced at power plants, the i-MiEV emits just one-quarter of a similarly sized gasoline car and half of a hybrid vehicle in Japan, where about 30 percent of electricity is sourced from nuclear power. Electric cars are also easy on the wallet, with one-tenth the running cost of a gasoline car in Japan if charged at night, when electricity is cheaper.

Kurihara said France is also an ideal market for electric cars since more than 80 percent of its electricity is generated from less-polluting nuclear power.

But Mitsubishi Motors faces tough competition against local heavyweight Renault SA. Speaking at the Reuters Auto Summit on the same day in Paris, Renault Executive Vice President Patrick Pelata said CEO Carlos Ghosn had met with French President Nicolas Sarkozy a day earlier to discuss the future of electric cars and a possible factory in France.

Renault's local rival PSA Peugeot Citroen has taken note. Earlier this year, Mitsubishi Motors agreed to work with France's top carmaker to develop an electric vehicle powertrain and consider co-production of electric cars down the line. But demand would depend largely on the car's price, which consists mostly of next-generation lithium-ion batteries.

Kurihara said the i-MiEV would cost consumers no more than 3 million yen (US\$28,350) after government-backed incentives. Nissan Motor, Renault and GM have not said how much their electric vehicles would cost.

13. Council Approves EU Airline Carbon Trade Deal

EU proposals to include the aviation sector in Europe's carbon emission trading scheme from 2012 will soon become law after clearing the final legislative hurdle. EU justice ministers approved a second-reading agreement struck with MEPs in June. The European parliament backed the deal in July. An analysis published by investment bank Merrill Lynch in September shows complying with a carbon caps set under the rules will cost the sector billions of Euros.

14. EU to Urge Other States to Curb Aviation Emissions

The European Union will press countries outside the bloc to include aviation in their current or future schemes for curbing emissions of greenhouse gases, its transport ministers have decided. As noted above, the 27-nation bloc plans to include aviation from 2012 in its Emission Trading Scheme (ETS), a key tool in its flagship program to fight climate change.

The ministers agreed that the EU executive, the European Commission, should try to convince other countries to do the same, either in current trading schemes or as part of an envisaged global deal. "The council (of ministers) requests the Commission to engage with third countries on the EU ETS to explore possibilities for such states to introduce equivalent measures," the ministers said in a statement. "It requests the Commission to promote the application of these provisions, in particular in the framework of aviation agreements with third countries."

The planned law covers internal and external flights to and from EU airports. It marks the first time the bloc is capping transport emissions and follows a doubling of airline emissions in Europe over the past 20 years.

15. EU Commission Seeks Advice on Monitoring Aviation Emissions

On October 7th, the European Commission opened a public consultation seeking technical input on monitoring and verification of aviation emissions as part of the European Union's cap-and-trade system. The consultation paper said that correct monitoring and verification of emissions would ensure the integrity of the system and underpin the value of allowances.

According to the legislative text agreed to in July by the European Parliament and EU countries represented in the EU Council, airline emission calculations will be based on fuel consumption multiplied by an "emission factor" to adjust for different types of fuel and different gases.

The consultation paper sets out 53 questions covering administration of the submission of emissions data (for example if authorities across the European Union should adopt common submission deadlines), use of weight data (for example, for freight or mail), setting levels of uncertainty for monitoring, and use of emission factors.

The document also raises the question of verification of data held by operators not based in the European Union and asks for input on how verifiers of such data can be assigned and accredited.

The Association of European Airlines, commenting in an Oct. 8 statement on the inclusion of aviation in the cap-and-trade effort, said that to reduce airline emissions, EU policymakers should prioritize reform of the management of European airspace into a single bloc, rather than the current patchwork of national systems.

Doing this could cut emissions by 12 percent because of routing efficiencies, the association said.

The consultation on monitoring, reporting, and verification of airline greenhouse gas emissions is open until November 3rd. The Commission said the short consultation period was because of the need for guidelines to be finalized in 2009.

16. Next U.S. President Should Commit To New Climate Deal, European Official Says

While the next U.S. administration will have less than a year to make progress on domestic climate legislation before negotiations toward a global treaty are to conclude in late 2009, it can provide an early signal to other nations that it intends to accept mandatory caps on its greenhouse gas emissions, Margot Wallstrom, vice president of the European Commission,

said on October 3rd. She noted that other nations are well aware that it may not be possible for the U.S. Congress to pass, and the next president to sign, comprehensive climate legislation before the December 2009 U.N.-sponsored negotiations in Copenhagen.

“We know the political situation—and the reality,” Wallstrom said following a forum on European and U.S. relations held by the Council of Women World Leaders and the Aspen Institute. “But it will mean a lot to see a different attitude and approach from the Americans” after January 2009, when either Sen. John McCain (R-Ariz.) or Sen. Barack Obama (D-Ill.) will be sworn in as the next president, she said.

“They have to show that they are engaged in the negotiations leading up to” Copenhagen, Wallstrom said. “We don’t expect that everything will be in place,” including implementation of U.S. domestic policies to curb its own emissions,” Wallstrom said. “But there also has to be a political signal, that the U.S. is engaging fully in the lead up to the Copenhagen summit,” she said.

Wallstrom said that the specifics of an international agreement could still be negotiated by the end of 2009 regardless of the fate of U.S. domestic legislation, as long as the United States shows a strong commitment to return to the negotiating table.

The actual reductions in greenhouse gas emissions that the United States and other developed countries might accept “are what will be negotiated in Copenhagen,” the European official said. “That is for the negotiations [to resolve]. But if we see that there is a political will” on the part of the United States, “that will change the whole game,” she said.

Supporters of U.S. participation in the next climate agreement—which would succeed the Kyoto Protocol’s mandatory emissions curbs that expire at the end of 2012—point to both Obama’s and McCain’s support for economy-wide emissions caps as evidence of a sea change in the U.S. position on climate change. For nearly eight years, the Bush administration vigorously opposed any deal that would subject the United States to binding emissions reductions. President Bush withdrew the United States from the Kyoto agreement in early 2001, arguing that it would harm the U.S. economy and essentially exempt rapidly developing China and India. But under considerable international pressure, Bush administration climate negotiators agreed at the December United Nations climate change meeting in Bali, Indonesia, to negotiate a new global deal as long as it includes “measurable, reportable, and verifiable” actions to address emissions from those countries.

How that pledge translates into specific commitments from China and other developing nations is one of the key challenges of the climate negotiations. Even if the next administration signs onto the measure, U.S. participation depends on ratification by U.S. senators. Many Republican senators—as well as some Democrats—remain openly skeptical of accepting any deal that does not bind China to similar actions. “Of course, we share the same interest in getting China and India and the other [developing countries] on board,” Wallstrom said. “But there is no other international framework” other than the existing United Nations negotiating process for resolving such issues, she said.

17. EU Pushing Emissions Limit for Power Plants; Seeks More Carbon Storage

Power stations built in the European Union after 2015 could be obliged to meet a new performance standard that would effectively outlaw the dirtiest coal-fired power plants unless

they implement carbon sequestration, EU lawmakers said October 7th. Lawmakers in the European Parliament's Environment Committee approved a restriction that would make it illegal for new power plants with a capacity of more than 300 megawatts to emit more than 500 grams (1.1 pounds) of carbon dioxide per kilowatt hour on an annual average basis.

The emission performance standard was added to draft EU legislation regulating carbon capture and storage (CCS), which was voted on by the Environment Committee alongside draft laws on emissions trading and on emissions limits for parts of the economy not subject to cap-and-trade. Lawmakers also voted on a regulatory framework for carbon dioxide injected into underground storage sites, stating that operators of CCS facilities should pay into a fund for long-term monitoring of sites, and that they would remain responsible for closed storage sites for 50 years, after which responsibility would pass to the EU country concerned.

The lawmaker responsible for the CCS dossier, British Liberal Chris Davies, called the standard a "Schwarzenegger clause" after the California governor's 2006 law restricting the wholesale purchase of electricity from the most-polluting power plants.

Speaking to reporters, Davies said EU member states have undertaken to launch 10 to 12 large-scale CCS demonstration projects by 2015, but added that there is little evidence of any progress. Imposing carbon dioxide output limits would promote CCS, Davies said. The European Union "must lead in CCS and in introducing emission performance standards to curb dirty power station construction."

Lawmakers on the Environment Committee backed Davies's redrafted proposals by a vote of 54-1, with six abstentions. But the full Parliament still must approve the plans in a plenary vote scheduled for December. As well as being subject to the approval of the full Parliament, the CCS legislation is subject to negotiation with EU member states in the EU Council before becoming law.

The Environment Committee also said that CCS could be encouraged by making 500 million allowances from the European Union's Emission Trading Scheme (ETS) available to investors who put in place CCS projects inside or outside of the European Union. These allowances could be sold to ETS participants who need them to cover excess emissions. At current carbon market prices, the 500 million allowances would represent a fund of around €12.5 billion (\$17.1 billion). Davies said the creation of such an allowance fund was the "single most important decision" lawmakers could have made to encourage CCS.

The Environment Committee also called on the European Commission to ensure that contracts for the 12 large-scale demonstration projects promised by EU countries should be in place by late 2009, in time for the United Nations-sponsored climate conference in Copenhagen in December 2009.

18. Sweden to End Green Car Rebate Six Months Early

Sweden's green vehicle subsidy plan will end next summer, six months earlier than originally planned, the government confirmed on September 8th. The subsidy regime, which allows for a rebate of 10,000 Swedish kronor (\$1,480) on the purchase of any vehicle officially designated as "green," was originally set to remain in effect until Dec. 31, 2009 but Environment Minister Andreas Carlgren said the program's success brought about its premature end. The government set aside SEK 50 million (\$7.4 million) to fund the program in 2007, and 100 million kronor in both 2008 and 2009. The grants quickly grew in popularity, and the government

decided to allocate an additional SEK 240 million (\$35.5 million) to the program in 2008. Carlgren said the government will allocate an additional SEK 325 million (\$48 million) for subsidies in 2009. But, noting that the program had "exceeded all expectations," he said the green car subsidies will stop altogether on June 30, 2009.

19. EU Ministers Agree on Plan to Let States Impose Environmental Levies on Freight

In informal meetings on September 1-2, the European Union's 27 Transport Ministers agreed in principle to a European Commission proposal to allow member states to assess environmental charges and other fees on road-freight traffic. The plan is to give countries the **option** of imposing the charges, at least initially, and the levies would **not** apply to carbon dioxide emissions, said Dominique Bussereau, the French secretary of state for transport, who presided over the meetings in La Rochelle.

France holds the European Union's six-month rotating presidency until year's end.

The meetings also included European Transport Commissioner Antonio Tajani, representatives from the European Parliament, and transport ministers from Norway, Switzerland, Tunisia and Morocco.

Bussereau said the ministers had only recently begun to discuss the so-called Eurovignette Directive, under which EU member states are currently only able to assess charges on trucks crossing their territory which are designed to recover the costs of building and maintaining road infrastructure. The Eurovignette is a sticker or certificate attached to a truck showing that a time or distance-based fee has been paid to compensate EU governments for road infrastructure costs.

Under the Commission's proposed revision of the directive, member states would be able to include the cost of pollution and other "external factors," including noise pollution, and congestion caused by heavy goods vehicles. The ministers agreed to the proposal in principle and agreed that it should be based on a polluter-pays approach, Bussereau said.

The thorniest questions include what could be taxed, and what could be done with the money. For now, trucks' carbon dioxide emissions could not be taxed because of resistance from certain countries. France supports including the emissions, but the United Kingdom and a few others do not, Bussereau said.

In August, France said its Parliament would consider a kilometer-based tax on foreign heavy trucks that use French roads but such a tax would apparently not be permitted under the current directive. Under Commission proposals, member states that assess environmental tariffs for road freight must use a standard method to calculate the charges and ensure they are transparent and proportional. They must collect the amounts using electronic systems to avoid hindering the free flow of traffic, the Commission said in July. The Commission proposed a system to charge vehicles that weigh 12 metric tons or more beginning in 2011 and vehicles exceeding 3.5 metric tons starting in 2012. Revenues raised by the environmental levies must be used for research and development of "clean" transportation or for cleaning up road transport-related pollution.

The French presidency is keen on making progress on transportation issues in the next four months, so that the next two EU presidencies, the Czech Republic and Sweden, will be able to reach political agreements. The ministers want to accomplish as much as possible before

parliamentary elections in June 2009, followed by the nomination of new European commissioners later in the year, events that will inevitably push aside other political discussions at least for several months, possibly longer.

20. Train Maker Says Rail Cleaner Than Air Travel, Seeks More EU Support

The European Union should provide more technical and trade support for its high-speed rail industry, one of the world's cleanest and most efficient forms of mass transportation, according to Patrick Kron, chairman and chief executive officer of Alstom, which builds high-speed trains. Kron told EU transportation ministers visiting the company's La Rochelle site on September 3rd that the EU rail industry needs more support for research and development, improved infrastructure, and, in particular, more effort to pry open certain non-EU markets to EU rail technology and products.

In particular, he criticized Japan for what he called over protection of its rail industry.

Alstom President Philippe Mellier told the visitors that his company's current high-speed trains (Automotrice Grande Vitesse, or AGVs) can travel at speeds of 300 to 360 kilometers per hour (186 to 224 miles per hour) and can carry passengers directly into town centers, making the trains strong competitors for a congested air transport industry.

Mellier said AGVs are nearly 100 times cleaner in terms of the level of carbon-dioxide emissions compared with air transportation. A typical passenger airliner emits 153 grams of carbon dioxide per passenger per kilometer, whereas the new AGV emits just 2.2 grams per passenger per kilometer, Mellier said. A passenger bus emits roughly 30 grams, while passenger cars emit 115 grams of carbon dioxide per passenger per kilometer, he said.

AGVs are also far more fuel-efficient than air transportation, according to Mellier. An airplane consumes seven to 15 liters of fuel per passenger per 100 kilometers (16-34 miles per gallon per passenger), depending on aircraft type, while a AGV consumes about 0.4 liter of fuel per 100 kilometers traveled (almost 590 miles per gallon per passenger), he said.

Kron said Europe is a world leader in very high-speed rail, which is currently worth an annual [Euros] 2 billion (\$2.9 billion) and has a projected growth rate of 3.6 percent over the next decade. Still, he said, while Alstom has had success selling its trains to Korea, California, and other non-EU markets, and is present in 70 countries, it faces significant trade barriers.

The Japanese rail industry is powerful, with about 10 percent of the world market, Kron said. In Japan they have a 99.7 percent market share, he said. "It's a problem that EU officials, parliamentary officials should deal with, to ensure that rules of fairness are respected in this field," he said.

Kron said Europe needs to do more to support research and development of very high-speed rail, first with better test centers and better signal systems to improve interoperability of EU national rail systems.

21. Lawmakers Overhaul Draft EU Law On Use of Biofuels, Renewable Energy

Draft legislation on the use of renewable energy and biofuels in the European Union could be substantially altered under plans backed on September 11th by lawmakers in the European Parliament. In a 50-2 vote with no abstentions, members of the Parliament's Industry Committee

adopted a revised version of legislative proposals that detail how the European Union will achieve targets by 2020 of having 20 percent of its energy come from renewable sources and 10 percent of its vehicle fuel made from biofuels.

The European Commission published in January its initial proposals on renewable energy and biofuels. The Industry Committee's draft incorporates the main goals of the Commission proposal, but adds a provision to allow countries to work together to meet their individual renewable energy targets, and includes additional requirements for biofuel sources.

Luxembourg Green Party lawmaker Claude Turmes, who is responsible for the dossier in the Parliament, called the Industry Committee's support of the revised draft legislative text "a great day for renewables in Europe." Speaking to reporters following the Committee vote, Turmes said the renewable energy legislation would be "the most concrete step this Parliament will take to reduce climate change emissions," and that nascent EU renewables policy will "build on indigenous sources of energy [and] give us much greater geopolitical independence."

The legislative draft backed by the Industry Committee supports the Commission's overall renewable energy target of 20 percent by 2020, but otherwise diverges from the original proposal in a number of ways. In particular, the Industry Committee ditched a plan to allow EU countries to transfer between themselves renewable energy guarantee of origin certificates, which would have allowed countries falling behind their targets to obtain renewable energy quotas from other member states. Turmes said this plan would have threatened national support schemes for renewable energy and could have enabled power generators to earn windfall profits.

The Industry Committee instead added a scheme allowing EU countries to engage in joint renewable energy projects, with each contributing country taking a share of the renewable energy "credit" earned, although in practice the renewable energy generated might be consumed in only one country. Thus, the United Kingdom, for example, could invest jointly with Spain in solar energy capacity, and the power generated would count toward both the British and Spanish renewable energy targets.

Under the proposals, member states have varying renewable energy targets depending on their capacities for alternative energy sources. Combined, each country's target adds up to an overall EU target of 20 percent renewable energy use. National targets under the initial proposal range from 10 percent in Malta to 42 percent in Latvia.

Turmes said that EU "neighbor" countries, such as Morocco or Turkey, could also participate in such schemes, with energy generated counting towards EU countries' targets as long as it could be shown to have been consumed in the European Union. Lawmakers, however, did away with a clause in the Commission proposal that would have extended this scheme worldwide. This would have been "ridiculous in a situation in which we want renewable energy to contribute to our geopolitical independence," Turmes said.

Lawmakers also made extensive changes to the draft legislation as it relates to biofuels. The Industry Committee retained the 10 percent by 2020 target, but added significant qualifiers.

- First, lawmakers introduced an interim target to have 5 percent of energy used in road transportation come from renewable sources by 2015. But the committee said that only four-fifths of the energy from renewable sources should come from current biofuels. It said the remainder could be met through electricity or hydrogen from renewable sources,

or from so-called "second generation" biofuels, such as fuel produced from ligno-cellulosic material, or algae.

- By 2020, two-fifths of the 10 percent biofuels target should come from these other renewable sources, according to the lawmakers' amendment.

Turmes added that the 10 percent by 2020 target is subject to a "major revision clause" in 2014. At that time, the impact of the biofuels target on food security and biodiversity will be assessed. Consequently, the interim 2015 target for biofuels is "the only target that is clearly established," Turmes said. Adding these qualifications was "a major breakaway from this craziness to rush into agrofuels--it is completely evident that this has an effect on food prices," Turmes added.

Turmes said he is optimistic about reaching an agreement on the revised legislation with EU member states represented in the EU Council. A first reading agreement on the legislation late in 2008 or early in 2009 is desirable because it would provide a basis for a "huge diplomatic effort" by the European Union ahead of the United Nations climate conference in Copenhagen in December 2009, at which a successor to the Kyoto Protocol will be negotiated.

The Industry Committee's position is subject to approval by a vote of the full Parliament, which is scheduled for Oct. 8-9.

22. Exhaust Fumes Growing Problem for Czechs

Car traffic exhaust fumes increasingly poison Czech air, says the latest Report on the Environment in the Czech Republic, submitted to the cabinet every year. "The impact of traffic on air quality keeps increasing. What is alarming is the year-on-year growth in greenhouse gas emissions and dust particle volumes," says the document.

The report was written by the Czech Environmental Information Agency (CENIA) in cooperation with the Transport Research Centre and other institutions.

Environment Minister Martin Bursík submitted a draft study on the environment for 2007 to his cabinet colleagues for comments at the beginning of the European Mobility Week, which will peak with the In Town Without My Car day on 22 September. The campaign, in which a record-high 87 Czech towns and cities are taking part, is designed to highlight the negative impact of car transport and to offer environmentally friendlier modes of transport.

The Report on the Environment for 2007 highlights the failure to curb greenhouse gas emissions due to an increasing volume of car and air transport in recent years.

"The decrease in greenhouse gas emissions has stopped, and their volume has been growing moderately since 2005. The unfavorable trend is due above all to growing emissions from transport," says the report.

In 1990, transport emissions made up 4% of the total amount of Czech greenhouse gas. The share has grown to about 13% by now.

"The year 2007 brought a growth in the volumes of individual car transport (by 2.7%) and air transport (by 2.4%), which contributed to a further increase in the environmental burden," the document says.

The latest set of data shows the Czech car registry grew to 4.28 million cars in 2007. Lorry numbers grew even faster and Czech haulers now have more than half a million trucks. However, the environmental study notes that the freight road transport volume fell by 4.4% last year, while freight railway transport volumes added 3.3%.

23. Impacts of Climate Change in Europe

Europe is warming faster than the world average and governments need to invest to help citizens adapt to a global warming, according to a new report by the European Environment Agency and branches of the World Health Organization and the European Commission. Key points:

- European average temperatures have risen by 1.0 Celsius (1.8 F) above pre-industrial levels, faster than an average global rise of almost 0.8 degrees.
- Shifts in precipitation are worsening differences between a wet northern Europe and a dry south, with some Mediterranean regions receiving 20 percent less rain than a century ago and could get steadily more arid.
- Global sea level rise could place 4 million Europeans at risk of flooding by 2100 along with 2 trillion Euros (US\$2,926 billion) of assets, from London to Athens.
- The reduction in Arctic sea ice has accelerated: in September 2007 the minimum surface was only half the normal minimum measured in the 1950s.
- Glacier retreat in Europe's mountains, and changes in temperature and precipitation, will affect river flows and farming. Two-thirds of Alpine glaciers had vanished since 1850.
- A northward movement of some fish species, by 1,000 km in the past 40 years, can have adverse effects on fisheries.
- Plants, birds, insects and mammals are moving further north and uphill. By the end of this century, plant species may have shifted several hundred kilometers to the north and up to 60 percent of mountain plant species may face extinction.
- The agricultural growing season is now longer, especially in the north. Although this may favor the introduction of new crops, crop yields will become more variable because extreme weather events are projected to increase.
- Increasing water demand for agriculture in the Mediterranean region will lead to unsustainable competition for water with tourism and households.
- The growing season of forests is also changing and the danger of forest fires will increase in southern Europe.
- Human health is also significantly affected by climate change. The 70,000 excess deaths reported from 12 European countries in a 2003 heat wave could be an example of health impacts to come. Health systems will need to be strengthened.

(Source: European Environment Agency (EEA))

24. London Mayor Proposes Climate Strategy to Address Increased Risks

On August 29th, London Mayor Boris Johnson released proposals for a climate change adaptation strategy aimed at responding to increased risk of floods and droughts in the U.K. capital. Among other things, the proposal outlined in the London Climate Change Adaptation Strategy calls for an "urban greening program" to address the risks of floods and heat waves, as well as developing strategies for managing flood risks along the tributaries of the Thames River and making infrastructure and homes more water efficient.

In the summary draft report, Johnson said the city was "not very well" adapted to recent weather events, such as the heat wave of the summer 2003, when 600 people died, or the damaging floods of summer 2007.

Although a catastrophic tidal flood is very unlikely in London, increasing sea levels have made floods a greater risk, because 15 percent of the capital currently lies in the "high risk" flood zone, including 1.25 million people and extensive public infrastructure, according to the report.

The Greater London Authority Act requires the Mayor of London to produce a strategy on climate change adaptation. Johnson's strategy will now be open to consultation with Greater London Authority (GLA) bodies, including the London Assembly (whose 25 members are elected to hold the mayor to account), the London Development Agency, Transport for London, London Fire and Emergency Planning Authority, and the Metropolitan Police Authority.

The mayor aims to publish the public consultation draft of the London Climate Change Adaptation Strategy in 2009.

The mayor's climate change proposal came a few weeks after Professor Bob Watson, the chief scientific adviser to the Department for the Environment, Food, and Rural Affairs (Defra), called for the U.K. government to take steps to prepare for the effects of an average increase in global temperatures of 4 degrees Celsius.

The report recommended an "urban greening program" to address both the risks of flood and of heat waves. While green spaces and street trees could absorb and retain rainwater, they also could help to cool the city during higher-than-average summer temperatures.

Priority actions for responding to floods include closer cooperation between the GLA bodies and the Defra to improve risk management on the tributaries of the Thames River and drawing up a drainage network including a plan to reduce surface water flood risk.

To fight the opposite threat of drought, the report recommended promoting rainwater harvesting and rain water recycling in new buildings. It also called for reducing leakage from water mains in London and for facilitating the retrofitting of the capital's homes to become more water efficient.

In an August 6th critique of the mayor's first 100 days in office, Darren Johnson, a Green Party member of the London Assembly, said the mayor had disappointed environmentalists by dropping a proposed £25 (\$45.50) emissions-based congestion charge which he described as "probably the biggest purchase order for potentially zero emission vehicles in the world." Under plans proposed by the former Mayor Ken Livingstone, sport utility vehicles (SUVs) with engines larger than 3,000cc (about 3 liters) were slated to pay a daily rate of £25 (\$45.50) to enter London's central congestion zone, up from the current £8 (\$14.50) rate.

25. Honda Banks on Hybrids, Russia for Big Europe Push

Honda Motor Co is counting on hybrid cars and the soaring Russian market to enter its next phase of expansion in Europe, where an economic slowdown in Western Europe is hurting sales more than expected, an executive said. Japan's No.2 carmaker sold a record 376,477 cars in Europe last year -- a rise of 22 percent -- with growth in all major markets except Germany as consumers flocked to its diesel cars.

But sales growth has slowed this year due to weaker overall demand, and also because new taxation methods in Italy, Spain and France based on carbon dioxide output prompted buyers to flee to brands with low-emission cars such as Volkswagen AG.

"There's been a sudden shift to cars with low CO2 emissions," Shigeru Takagi, senior managing director and head of European operations, told a small group of reporters at Honda's headquarters in Tokyo. "European makers are quickly responding to that trend, and right now we're a bit behind."

Takagi said overall demand in Europe was shrinking at a faster pace month after month, with September also starting off poorly. New car registrations in Britain, Honda's biggest market in Europe, had their worst August since 1966, while Germany, Italy and Spain also recorded double-digit drops.

About the only bright spot is Russia, where Honda's sales jumped 157 percent in the first six months of this year, single-handedly absorbing the drops in Western Europe. In all of Europe, Honda's sales grew 7.5 percent to 218,925 cars -- which represents just over a tenth of its worldwide sales.

At the current pace, Takagi said Honda's sales in Russia would exceed 100,000 cars in one or two years, from 38,600 in 2007. The biggest challenge now was supplying enough Civic and Accord sedans to meet swelling demand, despite plans to produce 60,000 cars at its Turkish factory this year -- or 20 percent beyond its official capacity, he said.

Takagi said Honda plans to roughly double the number of sales outlets in Russia to 100 in two to three years.

Honda was also studying whether to bring its premium Acura line -- now available only in North America and China -- to Russia, where distributors were clamoring for a launch, he said. "There's quite a number of Acura MDX (sport utility vehicles) entering Russia through unofficial routes." A decision would need to be made "very soon", he said, because setting up a sales network takes two to three years in Russia. "Even if we decide now, a launch would come no sooner than 2010."

Honda is aiming to boost sales in Europe, excluding Turkey, by 14 percent to 430,000 cars this year. The new Jazz hatchback, called Fit in some markets, will debut next month, with CO2 emissions likely to be somewhere between 120 and 129 grams/km.

To grow everywhere else in Europe, Takagi said Honda was counting heavily on a new family of cheaper hybrid cars to go on sale in Europe, North America and Japan next spring. The new dedicated hybrid model, Insight, will emit less than 120 grams per km of CO2, meeting requirements for tax incentives in many countries, and will come at a good time as diesel prices have risen to cost about the same as petrol, he said.

The concept version of the Insight will be shown for the first time at the Paris Motor Show next month.

Honda has also said it will roll out the CR-Z compact gasoline-electric sports car and a hybrid version of the popular Jazz to join the Civic hybrid over the next few years. "With the Civic hybrid and the Insight next year, hybrid cars would make up about 10 percent or more of our total European sales," Takagi said. "That ratio would be higher than for any other region."

Honda is aiming to double sales of the Civic hybrid in Europe this year to 20,000 units, while shooting for a bigger volume for the Insight, Takagi said.

26. Plug-In Hybrid Car Launched In the UK

A hybrid car which can be charged from a normal domestic electricity supply has been launched. The Toyota Plug-In-Hybrid-Vehicle (PHV) is powered by a combination of a battery and a standard petrol engine. On short journeys, the car uses electric power to reduce its greenhouse gas emissions.

Previous hybrid vehicles, such as the Toyota Prius could not be charged from the grid - the battery was charged as the car drove along.

Initial tests on the vehicle will take place over the coming year, with 50 employees of the energy company EDF using the PHV for journeys in the Greater London area. Tests on the car in France suggest that for journeys up to 25 kilometers, its fuel efficiency is around 60% better than that of the standard Prius.

The PHV has a maximum range of six miles in electric mode, after which it switches to standard hybrid mode with the battery charging as the car moves.

The car can be charged either from a standard household electrical point or at specially designed charging posts, 40 of which have already been installed in the UK by EDF Energy.

The PHV's top speed in electric mode, 100 km/h (about 60mph) marks a significant step up on the Prius, which could only manage around 40 km/h (about 24mph) when running on battery power.

Toyota hopes the tests with the EDF employees would provide data on the car's emissions and performance in a real-life situation, as well as information on British driving habits.

Toyota is now working on new battery technology to extend the car's limited range in electric mode.

27. Hydrogen Cars Added to EU Vehicle Approval System

On September 3rd, lawmakers in the European Parliament approved draft legislation setting out a common European Union-wide system for approval of hydrogen powered vehicles by an overwhelming majority. The legislative proposals, put forward by the European Commission in October 2007, will see existing EU vehicle type approval rules modified to include hydrogen vehicles, and hydrogen components in vehicles. In approving the proposals by a vote of 644-2, with 11 abstentions, lawmakers made only minor changes to the Commission's draft text, including the addition of hydrogen leakage detection sensors to the list of components subject to type approval. The draft Regulation must now be approved by EU member states represented in the EU Council before becoming law.

NORTH AMERICA

28. ARB Publishes Draft Regulations for In-Use Heavy-Duty Trucks

The California Air Resources Board (ARB) published for public comment its latest draft version of a new regulation that, if adopted at the Board's 11 December hearing, will further reduce emissions from the approximately one million in-use heavy-duty diesel trucks that operate in California beginning in 2010. The regulation, which originates from the board's diesel program, is targeted at further reductions in NOx and PM emissions, and will require truck owners to install diesel PM filters on their rigs starting in 2010, with nearly all vehicles upgraded by 2014. Owners must also turn over engines older than the 2010 equivalent to cleaner engines according to a staggered implementation schedule between 2012 and 2022.

A second regulation, which is part of the AB 32 Climate Change Proposed Scoping Plan, requires that long haul truckers install fuel-efficient tires and aerodynamic devices on their trailers that lower greenhouse gas emissions and improve fuel economy.

The proposed new regulation would apply to any person, business, or federal government agency that owns or operates affected vehicles in California. Affected vehicles include heavy-duty diesel-fueled vehicles with a GVWR greater than 14,000 pounds; yard trucks with off-road certified engines; and diesel-fueled shuttle vehicles of any GVWR that have a capacity of 10 or more passengers and routinely drive an average of 10 trips per day to or from airport terminals, marine terminals, and rail based stations.

Drayage trucks and utility-owned vehicles would be subject to the regulation beginning 1 January 2021. The proposed regulation would be applicable regardless of where the vehicle is registered.

In general, the regulation would require owners to reduce PM and NOx emissions from their fleet by upgrading the vehicles to meet BACT (Best Available Control Technology) standards for PM and NOx. The BACT standard for PM is an engine equipped with the highest level verified emission control device for PM or an engine originally equipped with a diesel particulate filter by the engine manufacturer. The BACT standard for NOx is an engine newly manufactured in 2010 or later or a 2010 emissions equivalent engine.

A fleet may meet these performance requirements by retrofitting a vehicle with a verified device that will achieve PM or NOx reductions or both as required, replacing an engine with a newer cleaner one, or replacing a vehicle with one having a cleaner engine.

There are exceptions to the regulation, including low-use vehicles, emergency and military tactical vehicles, and personal-use motor homes. School buses would be subject only to requirements for reducing diesel particulate matter and not for engine replacement.

The state is offering truck owners more than a billion dollars in funding opportunities to help with the cost of the proposed diesel rule. Funding options include Carl Moyer grants, which are designated for early or surplus compliance with diesel regulations; Proposition 1B funds, for air quality improvements related to goods movement; and AB 118, which establishes a low-cost truck loan program to help pay for early compliance with the truck rule.

To better assist truckers, ARB is evaluating ways to integrate these programs so that truckers can get a grant and a loan at the same time, minimizing paperwork and significantly reducing the monthly payments for a new truck loan.

The truck NOx/PM regulation is expected to save 9,400 lives between 2010 and 2025, and greatly reduce health care costs. These benefits have a value of \$48 to \$69 billion. The cost of

installing the trailer greenhouse-gas-reducing technologies will be quickly paid back through lower fuel use. Without this regulation, ARB said, California will not be able to meet US EPA-mandated air quality standards and deadlines, and could subsequently lose billions of dollars in federal highway funding.

Heavy-duty big rigs are the largest remaining source of unregulated diesel emissions in California, responsible for 32% of the smog-forming emissions and nearly 40% of the cancer-causing emissions from diesel mobile sources (other diesel emitters include trains, off-road vehicles and marine engines). The rules are expected to impact more than 400,000 trucks registered in the state, as well as about 500,000 out-of-state vehicles that do business in California, and over a half million trailers.

State officials say the rules are necessary for Los Angeles and San Joaquin Valley to meet federal air quality standards that they are now violating. A final vote by the board on the regulatory changes is slated for mid-December.

29. Southern California Ports Clean Up Polluting Trucks

The ports of Los Angeles and Long Beach, comprising the busiest US cargo complex, have launched a landmark clean-air program banning some 2,000 older trucks blamed for half the pollution spewed by the ports' diesel haulers. The port complex ranks as the biggest air pollution source in Southern California. Heavy-duty trucks contribute well over a third of the ports' overall diesel exhaust emissions and are the most visible to local residents, the ports have said.

The two adjacent seaports, which together account for 40 percent of all US container traffic, instituted the ban on pre-1989 model-year diesel trucks as part of larger plans to slash air pollutants to below-2001 levels in five years. Those plans were crucial to paving the way for port expansions long stalled over concerns about pollution-linked illnesses in nearby communities.

The nearly 17,000 trucks that ply the roads into and out of the ports daily produce more smog and soot than all 6 million cars in the region and cause 1,200 premature deaths annually, according to the California Air Resources Board. Asthma rates among children living in the vicinity are double the national average, while dock workers and truck drivers face significantly higher risks of lung and throat cancer, various studies have shown.

The ban on pre-1989 trucks immediately excludes more than 2,000 vehicles -- roughly 14 percent of the ports' combined fleet of diesel haulers -- that account for about half of the area's total truck pollution, port officials say. Supporters say scrapping those 2,000-plus trucks will remove more than 350 tons of harmful emissions. Emissions will be further reduced in 2012 when the ban is extended to all trucks built before 2007.

30. New Study Says Air Pollution Takes 2 Months off Mexicans' Lives

Mexicans would live an average of two months longer if they breathed cleaner air, Harvard researchers conclude in a new study. The study found that between 2001-2005 some 7,600 people's lives were cut short each year by diseases related to air pollution, representing about 1.6 percent of annual deaths in Mexico. The highest proportion of those deaths - 38 percent - were in Mexico City, a valley long known for its dense layer of smog.

Mexico's average life expectancy — 72.3 years for men and 77.8 for women — would be longer by 2.4 months if urban air quality were improved, according to the study published in Proceedings of the National Academy of Sciences.

The researchers — Gretchen Stevens, Rodrigo Dias and Majid Ezzati of the Harvard Initiative for Global Health — used death records and air quality monitoring data to estimate the number of people who died from lung cancer, cardiopulmonary diseases, respiratory infections and other illnesses as a result of breathing heavily polluted air. Then they estimated what Mexico's average life expectancy rate would be if those people had not died early.

The researchers also studied the effect on mortality rates from the use of solid fuels, like coal and wood burning, and from unsafe water sanitation in Mexican homes. From 2001 to 2005, about 3,000 people died each year from diseases related to using dirty water, while household fuels caused illnesses that killed 3,600. The study estimated that exposure to unsafe water sanitation shortened Mexico's average life expectancy by 1 month, while unclean fuels reduced it by 1.2 months.

The three factors combined killed 14,000 people a year or 3 percent of total deaths in Mexico. Mexicans would live nearly five months longer if all three environmental problems were eliminated, the study found.

But the study found that while air pollution affected Mexicans of all income levels evenly, a disproportionate number of people in impoverished communities died from exposure to dirty household fuels and unsafe water. The study found, for example, that improving water sanitation would reduce the child mortality rate by 6.2 percent in the poorest Mexican communities, but would have little effect in the wealthiest areas.

Worst affected were indigenous communities in the southern states of Chiapas, Guerrero and Oaxaca. Some 50 municipalities in those states had nearly 6 percent of overall deaths and 16 percent of child deaths from the three environmental risk factors, even though only 1.5 percent of Mexico's population lives there.

"On the one hand in Mexico, air pollution is responsible for far more deaths than other environmental conditions," said Ezzati, an associate professor at Harvard School of Public Health. "On the other hand, if you look at the poor parts of the country, there is a much bigger affect from not having clean water and not having clean fuel."

The study found that while air pollution affected mostly adults, unsafe water sanitation and dirty household fuels had a bigger impact on children.

The study noted that Mexico has rapidly reduced the number of households using dirty fuel and unclean water in the past two decades, and that its overall child mortality rate was on par with wealthier countries at 5.7 per 1,000.

31. Obama Said Ready to Declare Carbon Dioxide Dangerous Pollutant

Barack Obama will classify carbon dioxide as a dangerous pollutant that can be regulated should he win the presidential election on November 4th, opening the way for new rules on greenhouse gas emissions. The Democratic senator from Illinois will tell the Environmental Protection Agency that it may use the 1990 Clean Air Act to set emissions limits, his energy adviser, Jason Grumet, said in an interview.

"The U.S. has to move quickly domestically so we can get back in the game internationally," Grumet said. "We cannot have a meaningful impact in the international discussion until we develop a meaningful domestic consensus. So he'll move quickly."

Proponents of regulation are hoping for better results under a new president. Obama adviser Grumet, executive director of the National Commission on Energy Policy, said if Congress hasn't acted in 18 months, about the time it would take to draft rules, the president should.

"The EPA is obligated to move forward in the absence of Congressional action," Grumet said. "If there's no action by Congress in those 18 months, I think any responsible president would want to have the regulatory approach."

32. California to Host Global Summit of State, Provincial Leaders in November

California Governor Arnold Schwarzenegger (R) is inviting government officials from around the globe to a Nov. 18–19 climate change summit in Los Angeles. The goal of the Governors Global Climate Summit is "to form a broad international alliance" of community and regional leaders interested in working together to curb greenhouse gas emissions, Schwarzenegger said. Governors from all 50 states will be invited, along with officials from provincial governments in China, India, Europe, Australia, Mexico, and Canada, Schwarzenegger said.

The summit will come just one month before international climate leaders meet in Poznan, Poland, at the 14th Conference of the Parties to the United Nations Framework Convention on Climate Change.

California has already teamed up with six Western states and four Canadian provinces to develop policies, including a regional emissions cap-and-trade program, to reduce the emissions linked to climate change. The state also has entered into agreements with Australia, the United Kingdom, and at least one Chinese provincial government to share information and technologies about curbing greenhouse gases.

33. 'Hydrogen Cities' Seen Driving Fuel Cell Adoption

Mass adoption of zero-emissions fuel cell cars will start with "hydrogen cities" in which refueling stations are rolled out to serve individual communities rather than a large region, according to a top California environment official. At the Reuters Global Environment Summit, California Air Resources Board Chairman Mary Nichols said a 4-year-old plan to build a "Hydrogen Highway" across the most populous US state would likely end up being focused on concentrated areas.

"The model of the 'hydrogen highway' might more accurately be termed as a 'hydrogen city,' Nichols said at the Summit." "There could be some stations strung out along major highway routes, but at least in the very early stages the stations are going to more likely be in areas where people who use their cars for commuting and driving normally will be able to come back to a centralized area to get fueled up."

Hydrogen fuel cell vehicles, which emit only water vapor, have long been touted as a way to reduce greenhouse gas emissions and reduce dependency on oil. A problem with fuel cells, however, is the lack of refueling stations, and proponents of electric cars say hybrids and fully battery-powered vehicles are the most reliable and cheapest ways to reduce oil consumption in the short term.

In 2004, California Gov. Arnold Schwarzenegger signed an executive order to build a network of hydrogen stations across California by 2010. Four years later, however, there remain just a couple of dozen hydrogen stations in the state. The automotive and energy industries have said a "chicken and egg" debate over what will come first -- the hydrogen cars or the stations to fuel them -- has slowed development of fuel cell vehicles. Nichols, however, said she expected to see "a fairly rapid build out of stations in the next couple of years," and expects there to be tens of thousands of hydrogen cars in California over the next decade or so.

Currently, automakers including General Motors Corp and Honda Motor Co Ltd are testing very small numbers of fuel cell vehicles in California.

"We're talking about going from a handful -- literally -- to hundreds to thousands to tens of thousands over the course of maybe a decade. That's a fast ramp up," Nichols said. "Even the Prius (by Toyota Motor Corp), which is the most wild and successful new automotive technology, went from a very small number in the first couple of years to becoming a popular success."

34. GE Stepping Up Push for Battery-Powered Cars

General Electric Co is stepping up its investment in developing new battery technologies for autos as it looks to increase its role in electrifying cars -- one of the key strategies to boost autos' fuel efficiency. The US conglomerate has raised its investment in A123 Systems Inc, a developer of batteries for hybrid cars, to \$55 million, and is working with US automaker Chrysler to secure government funding to develop a system to electrify larger passenger vehicles.

GE is working with Chrysler to get \$10 million in funding from the US Department of Energy to produce a system that would incorporate both the lithium-ion battery technology automakers are focusing on for the next generation of hybrid and electric autos expected in the next few years. That \$10 million in funding, if approved, would be matched by GE and Chrysler.

The drive to shift cars from relying on gasoline for the bulk of their power to being electric-powered, which would reduce their emissions of carbon dioxide, faces a major challenge in the slowing world economy. Recession fears have taken oil and gasoline prices down from summertime record highs -- easing one of the pressures that had piqued consumer interest in electric cars and hybrids.

GE also said it had invested an additional \$30 million in A123, giving it a 9 percent stake in the Watertown, Massachusetts-based company. GE made the investment in May, ahead of A123's filing for a \$175 million initial public offering. A123 has not yet set a date or pricing range for its IPO.

A123, working with Germany's Continental AG, is in the running to supply next-generation lithium-ion batteries to General Motors Corp for the forthcoming Chevy Volt, a plug-in car the No. 1 US automaker aims to begin selling in 2010. Compact Power, a unit of South Korea's LG Chem Ltd, is the other contestant in that race.

35. Appellate Panel Hears Arguments on Soot Rule

A U.S. Circuit Court of Appeals for the District of Columbia panel has heard arguments challenging the Bush administration's 2006 air pollution rule for particulate matter. At issue is a

U.S. EPA rule that lowered soot levels measured over a 24-hour period by nearly 50 percent, from 65 micrograms per cubic meter to 35 micrograms. The rule also keeps the annual fine particulate matter standard at 15 micrograms per cubic meter, though EPA staff and the agency's scientific advisors had recommended a standard between 13 and 14 micrograms.

Challengers must persuade the three-judge panel that EPA Administrator Stephen Johnson's support for the rule was arbitrary and not backed by science. States and environmental and public health groups challenging the rule say it is too weak and fails to protect the most vulnerable people.

The attorney for a coalition of states noted that EPA is required to err on the side of caution when devising health-protective standards and said lowering the annual standard to 13 micrograms could save hundreds of lives. He said EPA had purposely ignored two studies showing lung damage in children exposed to long-term particulate matter concentrations of 15 micrograms per cubic meter. He urged the court to remand the rule, which would force the agency to go back and further justify its decision. That move would likely punt any particulate matter decision to a new administration, which could choose to set a new standard.

The Justice Department attorney argued that the EPA administrator did not have enough evidence to change the annual standard. He called Johnson's decision "rational."

The attorney for Earthjustice focused on EPA's decision to make a secondary soot standard aimed at protecting visibility the same as the primary standard. EPA's Clean Air Scientific Advisory Committee said that if the agency continues to rely on the primary standard, visibility will decline, he said.

Judges Douglas Ginsburg, Thomas Griffith and Garland heard the arguments.

36. EPA Tightens Lawn Mower, Motor Boat Emission Rules

Exhaust-spewing lawn mowers and speed boats will get a green make-over under tough new rules from the US Environmental Protection Agency designed to reduce smog and save millions of gallons of gasoline. Gas-powered engines in lawn and garden equipment will be required to cut smog-forming emissions by 35 percent, while engines in personal watercraft will have to cut smog-forming emissions by 70 percent and reduce carbon monoxide emissions by 20 percent.

The rules go into effect in 2010 for marine engines, including inboard and outboard engines, and in 2011 for lawn and garden equipment with horsepower of 25 or less, such as lawn mowers and weed whackers.

With Americans spending more than 3 billion hours annually tending gardens and more than 500 million hours in recreational boating, the new rules will ease air pollution and help prevent 300 premature deaths and result in 1,700 fewer hospitalizations, according to the EPA.

The EPA estimates annual emission reductions of 600,000 tons of hydrocarbons, 130,000 tons of nitrogen oxide and 1.5 million tons of carbon monoxide once the rules are fully implemented. Consumers will save 190 million gallons of gasoline each year.

The agency predicts that manufacturers will turn to catalytic converters to meet the new standards.

37. Affordable Electric Cars Said to be Many Years Away

General Motors Corp's plug-in Chevy Volt and other electric vehicles have generated widespread consumer fervor for cleaner, less fossil fuel-dependent cars, but the high battery cost means it will be years before those cars are affordable to most Americans according to executives attending the Reuters Autos Summit.

They agreed that low-emission electric cars are critical to the future of the US auto market due to high gasoline prices and increased concerns about global warming. But at roughly US\$10,000 each, the light, long-lasting lithium-ion batteries key to powering electric cars will make those vehicles prohibitively expensive until production levels are ramped up to the hundreds of thousands.

GM's plug-in Chevrolet Volt, slated to hit showrooms in late 2010, is among of the biggest efforts to bring an electric car to the mass market. The Volt is expected to be able to go 40 miles on a single charge before dipping into its gas tank. But GM said that it will only produce 10,000 Volts in its first year of production, eventually increasing that to about 60,000. GM has not said how much the Volt will cost, but plug-ins are expected to carry a premium of around US\$10,000, compared with a premium on hybrid electric cars of between US\$3,000 and US\$5,000.

Because that level of mass-market adoption is so far out, many automakers are being less aggressive than GM in predicting when it will have a plug-in on the market. For example, Toyota Motor Corp, which is testing a plug-in version of its popular Prius hybrid car, said it has not set a timeline for retail sales and has still not decided how it will balance the cost of the vehicle with the number of miles it will be able to travel on all-electric power before the gas tank kicks in.

Toyota is also studying whether mass adoption of plug-in cars would indeed reduce harmful carbon dioxide emissions if the electricity used to power them was produced from sources such as coal-fired plants.

Ford Motor Co CEO Alan Mulally told the Summit that improving fuel efficiency in traditional combustion engines was still the most affordable near-term solution to reducing gasoline consumption. Lithium-ion batteries, he added, require much more study and investment before Ford will be able to transform its small plug-in test in Southern California into a mass market product.

Chrysler LLC has unveiled three electric car prototypes and said it would bring one to market by 2010.

Following are details on electric vehicle programs at the six major automakers in the US market.

- GM plans to roll out its all-electric Chevrolet Volt plug-in car in late 2010, with full-year production of 10,000 units initially and eventually ramping up to 60,000 units. The hatchback is designed to go 40 miles on a single charge before a small, onboard engine kicks in to charge the battery. The Volt will be equipped with a T-shaped, 400-pound lithium-ion battery. GM, which showed off the production version of the Volt this month, will choose a battery supplier by the end of this year. LG Chem unit Compact Power and a consortium of Germany's Continental AG and US-based A123 Systems are competing for the closely watched contract.

- Toyota will roll out a plug-in version of its top-selling Prius hybrid at the end of 2009, making it available to fleet operators such as government agencies and universities. It has yet to set a target launch for a mass-market plug-in hybrid. Toyota says the Prius prototypes have shown an initial all-electric cruising range of 13 kilometers (8 miles).
- Ford is currently testing 20 plug-in versions of its Escape SUVs as part of an alliance with Edison International utility Southern California Edison. The test is expected to run for about three years. Ford has said it sees a market for plug-in vehicles as still five years away. In the short term, Ford is focusing on improving the efficiency of gas engines by using turbochargers and other technology.
- Chrysler plans to launch an electric vehicle for North American customers in 2010. Chrysler showed off the prototypes for three electric vehicles -- one based on its Chrysler Town & Country minivan, one based on its Jeep Wrangler SUV and a Dodge-branded all-electric sports car. Chrysler has yet to decide which vehicle it will manufacture first or where production will be based. It is working with A123 Systems and other battery suppliers. Lotus Cars Ltd has been Chrysler's partner in designing the Dodge EV sports car, a model aimed at the market now dominated by privately held Tesla Motors and its US\$109,000 Roadster.
- Honda is concentrating on launching traditional hybrids, which twin battery power and a gasoline engine. Honda will roll out its all-new Insight hybrid in April 2009. The automaker is aiming for annual sales of 200,000 units globally. The five-door, five-passenger car will be priced below the market-leading Prius. Honda has repeatedly said that it believes the widespread use of plug-in hybrids will require more advances in battery technology.
- Nissan plans to start testing an all-new electric car being developed in Japan and aims for global sales of the still-unnamed battery-powered car by 2010. Unlike GM's rechargeable Volt, Nissan's new electric car would have no back-up combustion engine, making it a zero-emission vehicle. Nissan has formed a joint venture with NEC Corp to produce next-generation lithium-ion battery packs.

US auto sales are down 11 percent in the first eight months of this year and are running at a 15-year low.

38. New York Yellow Cab Owners Sue Over Green Plan

A group of New York taxi owners is suing the city over a plan to turn the entire fleet of cabs "green" by 2012, saying the plan compromises safety and is unconstitutional. Under the plan, promoted as an environmental model for other large cities, every new taxi must get at least 30 miles per gallon (7.8 liters/100 km), a target now met by hybrid and clean diesel cars.

The Metropolitan Taxicab Board of Trade, an association of taxi owners accounting for about a quarter of the city's 13,000 yellow cabs, filed a complaint in Manhattan federal court seeking an injunction to keep the regulation from taking effect.

There are already about 1,400 hybrid taxis in the city, the Taxi and Limousine Commission said.

According to the lawsuit, only the federal government, not city officials, has the power to set fuel emission and efficiency standards. Moreover, hybrid cars "have never been meaningfully tested and have no proven record of safety or reliability as commercial vehicles," the lawsuit said, noting that taxi cabs endured much heavier use than normal private vehicles, often being driven for 24 hours a day.

"While a decision to announce the immediate change to 'clean' taxis might be politically enticing and expedient, it is also irresponsible, dangerous and illegal," the suit said.

New York Taxi and Limousine Commissioner Matthew Daus said in a statement the agency was moving ahead with its plan, "as it is the responsible thing to do." "I want to send a clear and unequivocal message to the riding public that hybrid-electric taxicabs are absolutely safe, as are all taxicabs that we regulate and inspect, and that they (riders) may hail them with complete confidence," Daus added.

ASIA-PACIFIC

39. Beijing City Raises Pump Prices to Fund Cleaner Fuel

Beijing's city authorities have raised pump prices by up to 4 percent to cover the cost of cleaner fuel, a gesture of support for efficiency and green growth at a time when global oil markets hit an eight-month low. Gasoline prices in the Chinese capital went up by 200 (US\$29.18) Yuan per ton, or around 2.5 percent, and diesel pump prices by 290 Yuan per ton, as much as 4 percent, effective October 7th.

The move is to help cover the cost of providing the city with cleaner but more expensive Euro IV standard fuel, the Beijing Municipal Commission of Development and Reform said in a notice posted on its website.

Wholesale prices have also been increased.

The price rise only affects Beijing, where city dwellers are more affluent and consumption has been rising quickly. The capital has also been at the centre of government drives to improve energy efficiency and curb pollution.

The increase comes on top of a nationwide hike in June of near 20 percent. But it is not the first time residents of the capital have had to deal with fuel prices rising faster than for their compatriots. In a nationwide fuel price increase in March 2006, Beijing prices rose more than the national average.

The National Development and Reform Commission, which sets energy policy, explained that move by saying it was more expensive to refine cleaner gasoline for the capital than the dirtier fuel used elsewhere in China.

China's domestic fuel prices have roughly doubled since the start of 2003, although they have lagged global crude markets, forcing refiners Sinopec and PetroChina to shoulder losses on sales of refined fuel.

Beijing promised to subsidize the agriculture, forestry, mass transit and taxi sectors to cushion the impact of higher prices.

Since the adoption of the Euro IV standards in the capital, there has been a notable improvement in air quality, the municipal government said. The clearer skies during the Olympic Games were so popular with the city's increasingly affluent and environmentally-aware residents that officials decided to roll out a permanent car control scheme.

They also aim to boost public transport and limit the number of new vehicles that hit clogged streets each year.

40. West Told By China To Keep Its Promises on Technology Transfer

Developed countries have failed to deliver on commitments made on funding and technology transfer to help developing countries combat global warming, according to a senior official with the National Development and Reform Commission. Speaking at a press conference in Beijing, Gao Guangsheng, with the commission's climate change department, said: "China will play its part as a developing country in tackling climate change, but a prerequisite is that developed countries provide funds and transfer technologies.

"A large amount of financial support is necessary for developing countries to adapt to and mitigate the impact of climate change, but the current funding from rich countries amounts to virtually nothing," he said.

Under the Kyoto Protocol and the United Nations Framework Convention on Climate Change, developed countries are obliged to provide financial support and transfer technology to developing countries with favorable terms. Lin Erda, one of China's leading negotiators on climate change, told China Daily earlier that the adaptation cost for developing countries is estimated by the United Nations Development Program at \$86 billion to \$109 billion a year. But developed countries have so far offered just \$5 billion to \$10 billion.

Members of the Group of 77 developing countries and China have said funding from developed countries should equate to 1 percent of their GDP, Gao said.

Meanwhile, the lack of an effective mechanism to facilitate technology transfer from developed countries has also hampered the fight against global warming. "More than 90 percent of the advanced technology related to climate change is in the hands of developed countries," he said. "But they are reluctant to provide it to developing countries out of concern for losing their competitiveness."

China will propose a new mechanism to help spread green technologies worldwide at a high-level conference organized by the United Nations and the Chinese government to be held in Beijing on November 7th, Gao said. The mechanism will provide better protection for intellectual property, thus encouraging the development of new technologies, he said.

The government has also worked out a detailed list of technologies that China needs, and its scientists will continue to update the list as new requirements arise, he said.

41. China Wants Quicker Action By West Before Agreement on 2050 Emissions Cuts

The United States, Japan, and other developed nations should set "midterm" targets for cutting greenhouse gas emissions by 2020 before pressing China and other developing nations to agree to long-term global cuts, China said in a September 28th submission to the United Nations climate secretariat. "While it is desirable to share views on the long-term global goal for

emission reductions, it is most important to firstly set the midterm emission reduction target for developed country Parties,” according to China, which provided its views for consideration by international climate negotiators who are working toward a global deal for cutting greenhouse gas emissions after 2012.

Specifically, any future climate deal should include a pledge by industrialized nations to cut emissions at least 25 percent to 40 percent by 2020, compared with their 1990 emissions levels, China said. “Only with such a mid-term target being clearly determined, is it meaningful to talk about any long-term goals for emission reductions,” China said in the eight-page submission.

China's Sept. 28 submission also calls on developed countries to commit to long-term reductions as well, calling for cuts of between 80 and 95 percent by 2050.

China joined other nations such as South Africa, Japan, and members of the European Union in offering submissions in recent months toward a global climate deal to succeed the Kyoto Protocol. The Kyoto agreement's first commitment period for emissions cuts expires at the end of 2012. Each nation's submission will be used by the U.N. climate secretariat, which will prepare a draft text for climate negotiators as they work toward a successor agreement to Kyoto. The text, to be released in June 2009, would be further refined in hopes of getting a global agreement when U.N. climate negotiations conclude in Copenhagen in December 2009.

The countries are submitting their views to a subsidiary body known as the Ad Hoc Working Group on Long-term Cooperative Action, which was launched under the U.N. Framework Convention on Climate Change. The United States has yet to submit its view, although it remains unclear whether the Bush administration will do so in its remaining months or defer the decision to his successor, who will take office in January 2009.

Generally, developed and developing countries agree that both midterm and long-term reductions are needed to curb rapidly rising greenhouse gas emissions over the coming decades and to combat increasing global temperatures and the threat of rising sea levels. In the last year, many of these countries—including the United States—have been negotiating a goal to cut emissions in half by 2050, either from current emission levels or from 1990 levels. But the Bush administration's acceptance of that long-term goal has hinged on whether rapidly developing China and India are included in such a deal.

China has long argued that before it and other developing nations agree to such a goal, the United States and other developed nations must agree to aggressively reduce their emissions in the near term—over the next dozen years or so—partly because industrialized nations produced most of the emissions now accumulated in the atmosphere.

China also signaled in its submission that it will continue to resist any effort to split developing nations into separate categories under which a handful of developing countries—including South Korea, South Africa, and Mexico—could offer their own commitments to curb emissions. South Korea's president, Lee Myung-bak, in a speech at climate talks that accompanied the Group of Eight summit in July, said his country “will vigorously support the long-term goal of cutting in half global greenhouse gas emissions by the year 2050” and said he hoped to announce a “mid-term mitigation goal for 2020” sometime in 2009. China said in its submission that such proposals run counter to a long-held principle of “common but differentiated responsibilities” set out in the U.N. Framework Convention, a global climate treaty that set the stage for mandatory emissions cuts under the Kyoto Protocol.

Under the principle of “common but differentiated responsibilities,” developed nations essentially took on more responsibility for reducing global emissions under the Kyoto Protocol given their historic contribution to global climate change. Developing nations were expected to take more modest actions that take into account their level of development. “Any further sub-categorization of developing countries runs against the Convention itself and is not in conformity with the consensus reached in the Bali Action Plan,” negotiated during U.N. climate talks in December 2007, China said.

42. Japan's Trade Ministry to Subsidize Purchases of Solar Power Generators

As its first project to promote solar power generation, the Ministry of Economy, Trade, and Industry (METI) will extend subsidies to taxpayers who purchase solar power generation equipment starting in fiscal 2009, ministry officials confirmed October 8th. The METI project calls for providing subsidies of ¥70,000 (\$700) per kilowatt of electricity generation. With a typical residential unit generating 3 to 3.5 kilowatts per hour, subsidies would amount to ¥200,000 to ¥250,000 (\$2,000-\$2,500) per unit, or about one-tenth of the unit's retail price, according to officials with the Energy Policy Division of METI's Agency of Natural Resources and Energy.

At the July 7–9 Group of Eight summit in Toyako, Japan, the government officially unveiled its Low Carbon Society Action Plan, known as the “Fukuda Vision,” named after the former prime minister. That plan called for elevating Japan to the world's most advanced nation powered by renewable energies. The solar power generation promotion project, which in part envisioned halving the price of generation equipment, was adopted as a Cabinet decision in late July. Manufacturers would be required to offer a 10-year warranty for units' performance and safety, officials said.

The subsidy program would run for five years, and as part of a fiscal 2008 supplementary budget now being debated in Parliament, METI will allocate ¥9 billion (\$90 million) to extend subsidies to 35,000 home owners. For fiscal 2009, the ministry is seeking ¥23.8 billion (\$230 million).

Solar power unit subsidies already are being offered by local Japanese governments, including Tokyo, which is planning to extend ¥300,000 to a three kilowatt unit in fiscal 2009.

Japan had been a world leader in using solar energy generation units in residents. However, after the government discontinued a subsidy program, installation of such equipment dropped because the units cost as much as ¥2 million (\$20,000). With the reinstatement of subsidies, Japan hopes to more than halve the price of units so that most homes will install the technology.

43. Japanese METI Seeks Subsidies, Tax Breaks to Cut Carbon Emissions

The Ministry of Economy, Trade and Industry (METI) is seeking tax breaks and subsidies to promote energy products and programs that can shift Japan into a low-carbon society, ministry officials said August 25th. Officials said the ministry also requested fiscal year 2009 budgetary appropriations in excess of the ¥416 billion (\$3.8 billion) it received in fiscal 2008, although they could not say by how much. Final numbers for the budget are due in December.

The ministry's budget request targets, among other items, the promotion of solar power generation units; **clean diesel autos**, scheduled to be introduced in Japan in 2009; and innovative technology development, such as carbon capture and storage; and other developments, the officials said.

To subsidize those programs, the ministry asked the Ministry of Finance to disburse money from the petroleum and coal special tax and other energy-related taxes that are not general revenue tax items and now primarily used for road construction, they said.

At the summit of the Group of Eight nations in July, gas utilities and consumer electric product makers exhibited home-use solar power generation, fuel-cell cogeneration and other systems powered by renewable energies, and those that consume considerably less fossil fuels. Exhibitors said their technologies have been established to withstand commercial use but that government subsidies are vital in selling the systems in numbers sufficient numbers to bring economy-of-scale benefits and to help lower prices.

For clean-diesel autos, the ministry is exploring subsidizing up to half of the price gap between the diesel- and gasoline-powered vehicles, or about \$1,000.

The ministry also requested a budget for subsidizing gasoline stations, department stores, and shopping malls for installing quick-charge units for electric vehicles, the officials said. Japan currently has almost no quick-charge locations for electric vehicles. It also asked for outlays for experimental mega solar systems for municipalities and business.

44. China Appears to Tilt Away From Diesels Toward Hybrids

A change in key guidelines issued by China's ministry for industrial planning, the National Reform and Development Commission, appears to tilt away from diesels. The commission's Industry Structure Adjustment Guidelines lists technologies China wishes to encourage.

Last December the commission revised the Guidelines and deleted a clause devoted to clean diesel. Other alternative technologies -- including hydrogen fuels, compressed natural gas, battery powered cars and hybrid vehicles --remained. The omission came at the same time China removed diesel engine parts from a list of clean technology components exempted from import tariffs. A year ago, clean diesel was also withdrawn from state-funded research into alternative vehicles.

"All things considered, we've decided to drop the clause. Clean diesel sedans are no longer classified as encouraged," said the head of the commission's Industry Policy Department, Yang Yongxin, in a December interview with the business newspaper 21st Century Economic Report.

Large-scale production of clean diesel fuel would require a costly upgrading of China's oil refineries. This would only become viable with a lifting of national fuel price controls, considered necessary for social stability. Increased demand for diesel would also put pressure on fuel supplies allocated to agriculture.

Yet not everybody agrees on the meaning of the change in the Guidelines. The director at the China Automotive Technology & Research Center think tank, reportedly points out the deleted clause was replaced by others naming more powerful diesel engines and better diesel exhaust filters. These are two components of clean diesel technology. "Before clean diesel was encouraged. Now it's also encouraged, but through more detailed specifications," he says.

45. China Said To Take Concrete Measures on Climate Change and Air Pollution

China has been taking concrete measures to deal with climate change, air pollution and energy efficiency issues, according to Chen Changhong, professor and director of Shanghai Academy of Environmental Sciences and Atmospheric Environment Institute. He said over the past 16 years, China has constantly explored a way of avoiding the old way of industrialization by polluting first and then treating. With more exchanges with the outside world, China has gradually realized the gap in air quality and environment compared with Europe and other western countries. Because nearly 70% of China's energy comes from coal, air pollution has been serious.

"Also due to the fast economic development, as a developing country and as a 'world factory', China is producing products for the whole world, but keeping pollution to its own land. Thus China shoulders the pollution and emission for the whole world in a large extent", said Professor Chen. Thus the world should see China as a country which stands on the world production chain, and help China to improve technology in dealing with pollution and greenhouse gas emission.

Chen Changhong said that the Chinese government has paid great attention to solving the air pollution issue. The Law on Atmosphere has been issued. Since the 2004, China has made long term plans and implemented them in getting rid of SO₂ in coal mines which are a major source of air pollution.

In the vast rural China, people also make use of methane produced by animal waste for heating, an effective way of reducing greenhouse gas emission.

In coastal areas, people's awareness in environment protection and climate change has been improved and they can make efforts together with the government to supervise and report air pollution and other pollution cases.

He said the government also made laws and regulations to direct enterprises to conduct clean production, for example to close down the out of dated high energy consumption and low technology enterprises and to encourage clean technology through tax reduction.

In eastern part of China such as Beijing and Shanghai, the Euro IV emission standards are taken for car emissions. Electric cars and buses are produced and used. In Shanghai, the bus only takes two minutes at the stop to recharge its battery.

Chen Changhong revealed that during the 2010 Shanghai World Expo, there will be an area especially for zero emission vehicles.

46. Beijing Returns to Congested Normal after Olympics

Beijing is returning to its congested normal after two months of traffic restrictions and factory closures which kept the city's pollution at bay for the Olympic and Paralympic games. The ban on vehicles on alternate days according to their registrations -- aimed at taking 45 percent of cars off the roads -- was not only successful in clearing the skies, but also eased congestion.

Restrictions on government-owned cars, which make up some 10 percent of Beijing's more than 3 million vehicles, will continue however in a move some experts see as a necessary pre-requisite to imposing wider controls.

Worse pollution than normal might be expected this autumn as factories and power plants in Beijing and surrounding provinces strive to reach their annual production targets despite the two months when they were forced to reduce emissions. Dust can also be expected to add to the pollution from the hundreds of building sites around the city that had to suspend operations from July 20.

47. Higher Risk of Death for Hong Kong's Poor on Bad Air Days

Poor people in Hong Kong have a higher risk of death when air pollution is bad, a seven-year study has found. "The finding is that people living in highly-deprived areas had higher risk of mortality after bad air pollution days," Wong Chit-ming, an associate professor at the University of Hong Kong's School of Public Health, said in an interview. "Most deaths occurred a day after the air pollution index showed a rise," said Wong, one of the researchers in the study, which was published in Environmental Health Perspectives.

The researchers pored through 215,240 deaths in Hong Kong between 1996 to 2002 from respiratory and cardiovascular causes. They had details on the districts they lived in, the income they earned when they were alive, whether they were single or married and if they lived alone before they died.

The data was compared against air pollution readings in the territory, taking into account four pollutants -- nitrogen dioxide, sulfur dioxide, and particulate matter less than 10 micrometers in diameter, and ozone.

The researchers found that more deaths occurred in poor neighborhoods right after air pollution readings shot up.

"These areas have more unemployed people, households earning less than US\$250 a month, single-person households, and more people living in shared flats," Wong said.

Such a phenomenon was not observed in richer neighborhoods.

Explaining why poorer people were more susceptible, Wong said: "They may smoke more, have less time to exercise, have poorer nutrition, less access to healthcare."

SOUTH AMERICA

48. Brazil OK's Euro-5 Diesel Starting 2012; Tightens Truck Requirements

On October 30th, Brazil's government and Petrobras agreed to a new schedule for desulfurizing diesel fuel, with Euro-5 (10-ppm sulfur) standards taking effect in major cities in 2012 and a complete phase-out of high-sulfur (2,000-ppm) diesel by 2014. An earlier agreement had required 50-ppm ULSD in 2009 but that standard won't be met nationwide, under the new deal.

In parallel with the fuels decision, vehicle standards have also been modified. Previously, Euro IV standards were slated to go into effect in 2009. Now these standards will be skipped and replaced with Euro V standards in 2012.

49. New Ecuador Constitution Includes Provisions to Protect Environment

On September 28th, voters in Ecuador overwhelmingly approved a new constitution, giving this Andean nation one of the world's most environmentally friendly charters. The 444-article constitution was approved by 64 percent of voters, compared to 28 percent who voted against it. The remaining votes were either blank or spoiled. The approval is a huge victory for President Rafael Correa.

The basic philosophy of the constitution comes from a Quechua indigenous phrase, *sumak kawsay*, which means to live well. The phrase is peppered throughout the constitution, and one of the key components of living well is guaranteeing a healthy environment.

Articles guaranteeing environmental protection run throughout the constitution, starting with Article 14 which “recognizes the right of the population to live in a healthy and ecologically balanced environment that guarantees sustainability and living well.”

While there are several other articles that guarantee respect for the environment and specific ecosystems—Article 258, for example, refers to the Galapagos Islands—the principle environmental norms are codified from Article 395 to Article 415. These range from general concepts on environmental protection to specific hot-button items on the agenda, such as a ban on the use of transgenic crops.

Article 396 enshrines in the constitution the concept of the polluter pays, something that environmental groups say is a huge advance over the last constitution, which was approved just 10 years ago.

Passage of the new constitution—Ecuador's 20th constitution since independence in 1822—however, is only one step in the process. Laws need to be passed to enact many of the new constitutional clauses, which will not be easy. A kind of ad-hoc legislature, which the Ecuadorian press has baptized the “baby Congress,” will carry out legislative functions until new lawmakers are elected. Under this new constitution, the name will be changed from Congress to the National Assembly. Elections could be held in February 2009.

50. Venezuela Offers Natural Gas Vehicles for Older Cars

Beginning in 2009, the Venezuelan government will give free natural gas-powered cars to motorists who junk their old gas-guzzling vehicles, President Hugo Chavez said on October 3rd. The initiative is intended to reduce gasoline consumption, which has become a growing financial burden on the government because of a heavy government subsidy that maintains the retail price at about 12 cents per gallon. The subsidy has driven car sales and made it economical to continue using inefficient, decades-old vehicles. In addition, Venezuela does not enforce any pollution or fuel efficiency standards. Past efforts to promote the use of natural gas have foundered because of the small number of service stations selling the fuel, although that number has grown. Chavez said that those who agree to give up an old vehicle in return for a free natural gas vehicle will also be given free fuel for one year. Chavez did not give additional details about the program but some question whether drivers will want to switch to natural gas as long as the price of gasoline remains very low.

51. Peru Issues New Air Quality Standards, Plans to Enforce Biodiesel Requirement

On August 22nd, the Peruvian government published new air quality standards that set maximum permissible limits on emissions of several gases as well as particulate matter. Supreme Decree 003-2008-MINAM, published by the Environment Ministry, establishes limits

on sulfur dioxide, benzene, hydrogen sulfide, total hydrocarbons (expressed as hexane), and particulate matter.

The decree, which calls for the limits to be implemented in a staggered manner, coincided with renewed warnings that the air in Lima, the Peruvian capital, is becoming increasingly polluted and unhealthy.

Of the different compounds listed in the decree, only sulfur dioxide emissions previously were subject to established quality standards. A 2001 law (Supreme Decree 074-2001-PCM) set the maximum limit for sulfur dioxide pollutants at 365 micrograms per square meter ($\mu\text{g}/\text{m}^3$). Under the new regulation, the maximum permissible levels of sulfur dioxide will fall to $80 \mu\text{g}/\text{m}^3$ in a 24-hour period by January 1, 2009, and to $20 \mu\text{g}/\text{m}^3$ by January 1, 2014.

Air quality standards for hydrogen sulfide also start on January 1, 2009, with a maximum limit of $150 \mu\text{g}/\text{m}^3$ over a 24-hour period. And as of January 1, 2010, maximum levels for hexane will be set at $100 \mu\text{g}/\text{m}^3$.

Benzene levels must be $4 \mu\text{g}/\text{m}^3$ or less by January 1, 2010, and $2 \mu\text{g}/\text{m}^3$ or less by the start of 2014. The standard for particulate less than 2.5 micrograms in size will be $50 \mu\text{g}/\text{m}^3$ by January 1, 2010, falling to $25 \mu\text{g}/\text{m}^3$.

Law 28054, passed August 8, 2003, requires the use of biodiesel mixture in diesel, but the measure has been postponed repeatedly. The new target date is January 1, 2009, and it appears the government will follow through with the legislation, which initially requires diesel fuel to contain at least 2 percent biodiesel. One year later, by January 1, 2010, diesel fuel will have to meet a 5 percent biodiesel target.

The state oil company, Petroperu, estimates that it will need around 700 barrels per day of biodiesel to comply with the law. Petroperu has budgeted \$40 million for the first purchase of biodiesel.

In the meantime, the country's Human Rights Ombudsman's office presented a new report on air quality in the capital, a follow-up to an initial study conducted 18 months ago. The new report, Air Quality in Lima and its Impact on the Health and Lives of Residents, says that 86 percent of the contamination in Lima is caused by public transportation and it called on both the central and city governments to take action.

CENTRAL AMERICA

52. Panama Will Join Regional Effort to Monitor Air Pollution

Panama will participate in a regional Central American air monitoring network, Panama's National Environmental Authority (ANAM) announced September 30th. The same day, the agency and other institutions installed the network's first air monitoring device in Panama.

The U.S. Agency for International Development (USAID) and the U.S. Environmental Protection Agency (EPA) are supporting the air monitoring project. Last year, the EPA issued a request for proposals for grants, to total \$1.2 million, for air quality management projects. The EPA's call for proposals was to benefit Costa Rica, El Salvador, Honduras, Nicaragua, Guatemala, and the Dominican Republic—nations which have a free trade agreement with the United States. The EPA statement said the financing is to support "air quality management training and capacity

building, including key projects in air quality monitoring and enhancing knowledge of air quality management concepts, information, strategies, tools, and programs. In addition, the EPA financing will help in the development of cleaner fuel and vehicle standards for the region, with the long-term goal of harmonizing standards, reducing sulfur in diesel and gasoline, and introducing cleaner vehicle technologies.”

The El Salvador-based Central American Environmental Commission on the Environment and Development, which includes representatives from Panama, Costa Rica, the Dominican Republic, El Salvador, Belize, Honduras, Nicaragua, and Guatemala, also is participating in the air monitoring network.

In addition, the U.S. National Aeronautics and Space Administration (NASA), the University of Panama, ANAM, and Panama's Water Center for the Humid Tropics of Latin America and the Caribbean (CATHALAC), have created the MesoAmerican and Caribbean Smog Blog, a website about the region's air quality, NASA announced September 30th. U.S. satellites provide data to the University of Panama and CATHALAC, which writes the blog. The site is intended to provide information about air pollution sources and air quality.

AFRICA

53. East African Countries Adopt Regional Framework Agreement on Air Pollution

Key provisions in the framework agreement are the following:

- Enact minimum regionally agreed emission standards for different categories of motor vehicles as stringent as fuel quality will allow by 2012.
- Establish programs on vehicle emission testing, inspection and maintenance and develop public information and training campaigns by 2010.
- Enact regulations to restrict the age of imported vehicles and require functioning catalytic converters by 2011.
- Enact regulations to reduce sulfur levels of imported fuels to 500ppm by 2010 and reduce sulfur in refined fuels (i.e., fuel refined by Kenya and Sudan) to 50ppm by 2012.

The World Bank is conducting a cost/benefit study on lower sulfur fuels in Africa which will be completed by 16 March 2009. All indications are the health part of the study is following a similar methodology to ICCT's China cost-benefit analysis. The refining part of the study is burdened by lack of data, but is proceeding nonetheless.

GENERAL

54. IMO Panel Sets Limits on Ships' Sulfur, Nitrogen Oxide Emissions

On October 10th, the environment committee of the International Maritime Organization (IMO) adopted new emissions standards to limit harmful emissions of sulfur oxides and nitrogen oxides from container ships and tankers. As widely expected, the week-long meeting in London of IMO's Marine Environmental Protection Committee (MEPC) ended with an announcement of a staggered timetable to reduce emissions of sulfur oxide (SO_x) from ships. Starting Jan. 1, 2012, the allowable sulfur content in fuel for vessels will fall from the current 4.5 percent to 3.5 percent, with a further drop to 0.5 percent due by Jan. 1, 2020.

New limits will also be applied to Sulfur Emission Control Areas, which cover the Baltic Sea and the North Sea area, the IMO said. Limits in those areas would be reduced from the current 1.5 percent to 0.10 percent, effective Jan. 1, 2015.

The regulations will enter into force on July 1, 2010 under the tacit amendment acceptance procedure. Under that procedure, amendments to the International Convention for the Prevention of Pollution from Ships (MARPOL) enter into force on the predetermined date unless more than one third of contracting parties to the convention notify IMO of their objection.

IMO also agreed to progressive reductions in nitrogen oxide (NOx) emissions from marine engines, with the new standards phased in over three stages.

- For Tier I engines—diesel engines installed on ships constructed between Jan. 1, 2000, and Jan. 1, 2011—existing rules would be retained, meaning nitrogen oxide emissions levels would be set at 17 grams per kilowatt-hour (g/kWh).
- For Tier II engines—diesel engines installed on ships constructed after Jan. 1, 2011, but before 2016—nitrogen oxide limits would be reduced to 14.4 g/kWh.
- For Tier III engines—those installed on ships constructed after Jan. 1, 2016—limits would be reduced to 3.4 g/kWh while ships are operating in designated emission control areas. Outside emission control areas, Tier II limits would apply.

The emission targets were set in an earlier MEPC meeting in London. In that meeting, held in April, the committee proposed to amend provisions in the International Convention for the Prevention of Pollution from Ships (MARPOL), replacing Annex VI Regulations for the Prevention of Air Pollution from Ships. The annex VI regulations came into force in May 2005 and have so far been ratified by 53 countries, including the United States, which ratified the regulations on October 9th. The 53 countries represented make up about 81.88 percent of the gross tonnage of the world's merchant shipping fleet.

In its Oct. 10 announcement, the IMO did not include any details on progress made on greenhouse gas discussions. The deadline for the MEPC to come up with what the IMO describes as a “coherent and comprehensive IMO regime to control [greenhouse gas] emissions from ships” is July 2009.

Oceangoing ships are responsible for 40 percent of sulfur dioxide emissions from mobile sources worldwide, a report issued October 3rd by the Environmental Defense Fund said. The report, *Floating Smokestacks*, used U.S. Environmental Protection Agency data to estimate that in 2001, oceangoing ships emitted as much nitrogen oxides, about 745,000 tons, as that produced by 94 coal-fired power plants. According to the report, ships emitted as much particulate matter as 117 power plants.

The report also said emissions of nitrogen oxides from ships in the lower Mississippi Valley in the United States are equivalent to those from 18 million cars. The report said, ship emissions in the Seattle-Tacoma area are equivalent to those from 13 million cars, and emissions in the Los Angeles area are equivalent to those from 11 million cars.

In addition, the report said, ships are responsible for 3 percent of worldwide greenhouse gas emissions, including 912 million tons of carbon dioxide, more than any nation except United States, China, Russia, India, and Japan.

According to the EDF study, global marine ship traffic is expected to grow 4 percent to 7 percent annually through 2012. By 2030, without protective standards, ships will account for 34 percent of U.S. mobile source nitrogen oxides emissions, 45 percent of mobile source fine particle emissions, and 95 percent of mobile source sulfur dioxide emissions, the report said.

55. WHO Says Post-Kyoto Framework Should Address Health Issues

Any international agreement that succeeds the Kyoto Protocol should incorporate mitigation of related health issues, a World Health Organization (WHO) official said October 8th at the conclusion of an international meeting to set global research priorities for climate change and public health.

“We want to make sure that people understand that there is a very clear linkage between climate change affecting our health and the need for action on that,” said Maria Neira, WHO director for Public Health and Environment. “To start with, we would like to see the health component included in the post-Kyoto Protocol, definitely. That's why it was so important to define this research agenda, because we want to feed that process.”

More than 80 leading climate change and health experts and U.N. donor organization representatives joined WHO Oct. 6–8, in Madrid to develop what they called “an evidence-based framework” for action on the human health implications of climate change. Experts gathered for the conference concluded that, among other threats, the changing climate will threaten human health with phenomena such as a surge in heat waves, salmonella, mosquito and tick-borne diseases, and mental illness.

Noting that “climate change does not occur in a vacuum,” the Neira said part of the research agenda includes studying how the phenomenon of climate change interacts with other health determinants and trends such as economic development, urbanization, globalization, and inequality.

Likewise, by bringing together existing studies on climate change and public health, experts aimed to look at the gaps in their knowledge and to seek out more efficient paths to implementation.

In addition to preventing adverse health effects, the agenda also calls for addressing the health benefits of reducing climate change, in hope of encouraging governments to engage in more aggressive preventive health strategies.

One tangible result of the conference is “a very substantial document” with guidelines for national governments. While the final document is not yet available, the WHO's Neira said a final edited version of the document from the Madrid meeting, “at least a summary,” will be made available “very, very soon.” Once approved by members of the WHO executive board, the document will be presented to the next World Health Assembly, usually held in May each year.

According to the WHO, the plan will “speed up, focus and intensify” research to provide evidence for world leaders when they meet in Copenhagen in December 2009 to finalize a global post-Kyoto climate agreement.

56. Study Finds Link Between Traffic Related Air Pollution and Perinatal Mortality

Background: ambient levels of air pollution may affect the health of children as indicated by studies on infant and perinatal mortality. Scientific evidence also implicated low birth weight and preterm birth, which are important determinants of perinatal deaths, with air pollution. However, most of these studies used ambient concentrations measured at monitoring sites which may not consider differential exposure to pollutants found at elevated concentrations near heavy-traffic roadways.

To examine the association between traffic-related pollution and perinatal mortality, this study used the information collected on a case-control study conducted in 14 districts in the City of São Paulo, Brazil, regarding risk factors for perinatal deaths. The residential addresses of cases (fetal and early neonatal deaths) and controls (children that survived the 28th day of life) were geocoded and the authors¹ calculated a Distance-Weighted Traffic Density (DWTD) measure considering all roads contained in a buffer surrounding these homes.

Results: logistic regression revealed a gradient of increasing risk of an early neonatal death with higher exposure to traffic-related air pollution. Mothers exposed to the highest quartile of the DWTD compared to those less exposed exhibited approximately 50% increased risk (OR_{adj}=1.47 (CI 95% 0.67 – 3.19). Associations for fetal mortality were less consistent.

Conclusions: These results suggest that motor vehicle exhaust exposures may be a risk factor for perinatal mortality.

57. Global Carbon Emissions Soar

Global carbon emissions are rising rapidly, an international study² says, with production of carbon dioxide in 2007 up sharply from the year before. The Global Carbon Project's 2008 report "Carbon budget and trends 2007" contains the following highlights:

- Annual mean growth rate of atmospheric CO₂ was 2.2 parts per million per year in 2007, up from 1.8 ppm in 2006, and above the 2.0 ppm average for the period 2000-2007. The average annual mean growth rate for the previous 20 years was about 1.5 ppm per year.
- Atmospheric CO₂ concentration rose to 383 ppm in 2007, which is 37 percent above the concentration at the start of the industrial revolution of about 280 ppm in 1750.
- The present concentration is the highest during the past 650,000 years and probably during the past 20 million years.
- The growth rate of emissions was 3.5 percent per year for the period of 2000-2007, an almost four-fold increase from 0.9 percent per year in 1990-1999.
- The biggest increase in emissions has occurred in developing countries, mainly China and India, while developed countries have been growing slowly.
- Currently, more than half of global emissions come from less developed countries. From a historical perspective, developing countries with 80 percent of the world's population

¹ Andréa Paula Peneluppi de Medeiros, Nelson Gouveia, Reinaldo Paul Pérez Machado, Miriam Regina de Souza, Gizelton Pereira Alencar, Hillegonda Maria Dutilh Novaes, and Márcia Furquim de Almeida, *Environ Health Perspect* doi:10.1289/ehp.11679 available via <http://dx.doi.org/>

² Source: Global Carbon Project (www.globalcarbonproject.com)

still account for only 20 percent of the cumulative emissions since 1751; the poorest countries in the world, with 800 million people, have contributed less than 1 percent of these cumulative emissions.

- Emissions from changes in land use come almost exclusively from deforestation in tropical countries, with an estimated 41 percent from South and Central America, 43 percent from South and Southeast Asia, and 17 percent from Africa.
- Natural land and ocean CO2 sinks have removed 54 percent of all CO2 emitted from human activities during 2000-2007. The size of the natural sinks has grown in proportion to increasing atmospheric CO2. However, the efficiency of these sinks in removing CO2 has decreased by 5 percent over the past 50 years, and will continue to do so in the future. That is, 50 years ago, for every ton of CO2 emitted to the atmosphere, natural sinks removed 600 kg. Currently, the sinks are removing 550 kg for every ton of CO2 emitted, and this amount is falling.

58. Gasoline Report Card Shows Leaded Era is Approaching the End

Using leaded fuel - beginning 2008	Current Status September08	Current estimate Likely to go Unleaded - PCFV
Afghanistan	On track	2008
Algeria	Revision	2013
Bosnia-Herzegovina	In dialogue	2010
Iraq	To contact	2011
Jordan	Unleaded	
FYR Macedonia (2008)	On track	2009
Lao PDR	Unleaded	
Mongolia	Unleaded	
Montenegro	On track	2009
Morocco	On track	2008
Myanmar	To contact	2010
North Korea	To contact	2010
Palestine	Unleaded	
Serbia	In dialogue	2010/2011
Tajikistan	To contact	2010
Tunisia	On track	2008
Uzbekistan	To contact	2009
Yemen	Revision	2009
18 countries	14 countries	End 2008: 11
New Additions		
Bhutan	?? Unleaded?	
Egypt	Added to the list	2010
Total	15	

Source: Partnership for Clean Fuels and Vehicles

59. IPCC Elects New Board, Adopts Program for Next Assessment Report

The Intergovernmental Panel on Climate Change (IPCC) wrapped up a five-day meeting in Geneva on September 4th by electing a new board and fixing a work program for the preparation of its next assessment report due in 2014.

As expected, IPCC Chairman Rajendra K. Pachauri was reelected for a second term.

Elected as vice-chairs at the Geneva meeting were Ogunlade Davidson of Sierra Leone, Jean-Pascal van Ypersele of Belgium, and Hoesung Lee of South Korea. The three replace current vice-chairs Richard Odingo of Kenya, Mohan Munasinghe of Sri Lanka, and Yuri A. Izrael of Russia.

Dahe Qin of China and Thomas Stocker of Switzerland will co-chair Working Group 1 on the physical science basis of climate change, and Vicente Barros of Argentina and Christopher Field of the United States will co-chair Working Group II on impacts, adaptation, and vulnerabilities.

Ramon Pichs Madruga of Cuba, Youba Sokona of Mali, and Ottmar Edenhofer of Germany will chair Working Group III on mitigation, while Thelma Krug of Brazil and Taka Hiraishi of Japan will continue to co-chair the Task Force Bureau on national greenhouse gas inventories.

The IPCC does not carry out any climate change research. Instead, the panel assesses the latest scientific studies on climate change, it's observed and projected impacts, and options for adaptation and mitigation. In its fourth assessment report, issued in 2007, the IPCC concluded that the impacts of global climate change--ranging from drought, flooding and other damage to coastlines, and increased loss of endangered species--are already unavoidable this century, even if greenhouse gas emissions are cut significantly in the future.

The IPCC's role is to assess on a comprehensive, objective, open, and transparent basis the latest scientific, technical, and socioeconomic literature produced worldwide relevant to the understanding of the risk of human-induced climate change, its observed and projected impacts and options for adaptation and mitigation.

In remarks delivered on August 31st to a ceremony marking the 20th anniversary of the IPCC, United Nations Secretary-General Ban Ki-moon stressed the need for governments to make substantive progress on a framework for a post-Kyoto agreement when they meet in Poznan, Poland, Dec. 1-12 for the next round of U.N. climate change talks. The goal is to finalize an accord at a subsequent meeting in Copenhagen in December 2009 setting out a comprehensive strategy for addressing climate change beyond 2012.

In addition to narrowing differences on a shared vision for long-term cooperative action, Ban said he hopes the Poznan meeting also will make "significant progress" on the implementation of existing agreements related to adaptation, capacity building, technology, and finance as well as on the Adaptation Fund so that the latter "can become well funded and fully operational."

Delegates at a climate change meeting in Bali, Indonesia, last December agreed to set up the Adaptation Fund to help poor countries adapt to the effects of changing climate. The fund has received an initial allocation of \$67 million, all from a 2 percent levy on transactions related to the Clean Development Mechanism, or CDM, the largest of the Kyoto Protocol's flexibility

mechanisms. That figure is far below the estimated \$40 billion to \$83 billion per year needed to fully confront adaptation issues in the developing world.

60. Arctic Sea Ice Reaches Second-Lowest Level Since 1970s

The area covered by arctic sea ice has reached the second-lowest level since satellite records began in 1978 due to seasonal melting from warmer temperatures, and it may set a record before the melting season is over, the National Snow and Ice Data Center found.

On August 26th, the sea ice totaled 2.03 million square miles, an area smaller than the 2.05 million square miles recorded in 2005, and the previous mark for the second-lowest total for ice coverage. The record low is 1.59 million square miles in September 2007.

Although ice melt is seasonal and there are expected natural variabilities, the extent of this melt and the consistent trend of shrinking ice during the summer is directly linked to climate change, scientists said. Models that attempt to predict changes in climate and its effects have all showed a steady decrease in ice that can only be attributed to a rise in greenhouse gases, according to Julienne Stroeve, a researcher scientist for the National Snow and Ice Center at the University of Colorado at Boulder. She said that natural variances alone would have led to a slower ice melt.

Unlike 2007, this year "the atmospheric conditions haven't been there for ice loss, but we are still losing ice," she said. The "atmospheric circulation pattern has changed and gone back to a pattern that we understood would help keep the ice there, but it's not doing that anymore."

The increase in melting ice--which researchers predict could lead to a total disappearance of summer sea ice at the North Pole by 2030, if not earlier--could cause a variety of complications. Without sea ice, polar bears could lose their ability to hunt for seals, a main source of their food. Stroeve also said that while the effect of summer ice melt is minimal, "like an ice cube in a glass of water," the decreased ice cover allows the oceans to warm, which in turn could cause glaciers and the ice cover in Greenland to melt. That could lead to rising sea levels, she said.

61. WMO Says Antarctic Ozone Hole Already Larger Than in 2007

The hole in the ozone layer over Antarctica has already surpassed its 2007 size this year, and is set to keep growing for another few weeks, according to the UN weather agency, the World Meteorological Organization (WMO).

The Antarctic ozone hole appears every year and normally stretches to about the size of North America, reaching its maximum size in late September or early October. But in 2008, the WMO said the protective layer, which shields the Earth from ultra-violet rays that can cause skin cancer, began to thin relatively late.

"During the last couple of weeks it has grown rapidly and has now passed the maximum size attained in 2007. Since the ozone hole is still growing, it is too early to determine how large this year's ozone hole will be," it said in a statement.

The ozone hole covered 27 million square km as of September 13th, against 25 million square km at its peak last year, according to the WMO whose statement was issued on International Day for the Preservation of Ozone Layer.

62. Asian Pollution Could Spur US, European Warming

Asian pollution from Asian power plants, cooking and heating could create summer hot spots in the central United States and southern Europe by mid-century, US climate scientists have reported. Unlike the long-lived greenhouse gas carbon dioxide, the particle and gas pollution cited in this report only stays in the air for a few days or weeks but its warming effect on the climate half a world away could last for decades, the scientists said.

"We found that these short-lived pollutants have a greater influence on the Earth's climate throughout the 21st century than previously thought," said Hiram "Chip" Levy of the US National Oceanic and Atmospheric Administration. "By 2050, two of the three climate models we use found that changes in short-lived pollutants will contribute 20 percent of the predicted global warming." By 2100, that figure goes up to 25 percent, Levy said in a telephone briefing.

The short-lived pollution that can cause long-term warming comes from soot, also known as the black carbon particles that result from fires, and sulfate particles, which are emitted by power plants. Soot particles are dark and absorb heat; sulfates are light and reflect heat, actually cooling things down.

Asian soot and sulfate pollution is likely to make for hotter, drier summers in the American Midwest and the Mediterranean region of southern Europe, Levy said, adding that heating and drying effects are not expected to hit Asia.

The reason for the expected pollution-related warming trend is that sulfate pollution, which has been linked to respiratory problems, is expected to decrease dramatically while soot pollution is forecast to continue increasing in Asia.

Ground-level ozone emitted by US transport vehicles is also a factor, the scientists said.

These pollutants have usually been dealt with as threats to air quality, but should also be considered for their impact on climate change, said Drew Shindell, a climate expert at NASA.

Carbon dioxide, which spurs global warming and is emitted from natural and human-made sources, still is going to dominate the climate change picture in the coming century, but because modern societies are built to emit lots of this substance, change is likely to be slow, Shindell said.

Targeting these air pollutants now makes sense, because of their role in the quality of the air people breathe as well as their impact on global warming, he said.

"It's no substitute for targeting CO₂ (carbon dioxide), which in the long run is the main contributor to global warming and has to be tackled, but ... the shorter-term pollutants can have a very large impact," Shindell said.

63. Experts Says Arctic Melting Shows Global Warming Serious

The incredibly rapid rate at which Canada's Arctic ice shelves are disappearing is an early indicator of the "very substantial changes" that global warming will impose on all mankind, according to a top scientist. Researchers announced that the five ice shelves along Ellesmere Island in the Far North, which are more than 4,000 years old, had shrunk by 23 percent this

summer alone. The largest shelf is disintegrating and one of the smaller shelves, covering 19 square miles (55 square km), broke away entirely last month.

"Climate models indicate that the greatest changes, the most severe changes, will happen earliest in the highest northern latitudes," said Warwick Vincent, director of the Centre for Northern Studies at Laval University in Quebec. "This will be the starting point for more substantial changes throughout the rest of the planet... Our indicators are showing us exactly what the climate models predict," he told reporters in an interview.

Vincent, who has visited the ice shelves along Ellesmere Island every year for the past 10 years, said the impact of higher temperatures this year was "staggering". His team had estimated that the shelves would lose eight square miles this summer. The true figure was 83 square miles. "What was extraordinary was just the vast quantity of open water ... you could see open water to the horizon in an area that is typically ice-covered throughout the season," he said.

The Markham Ice Shelf split away from Ellesmere Island in early August. Two large chunks totaling 47 square miles have broken off the nearby Serson Ice Shelf, reducing it in size by 60 percent. The Ward Hunt Ice Shelf, at 155 square miles the largest of the remaining four shelves, is disintegrating.

The peak temperature the team recorded was 67.5 degrees Fahrenheit (19.7 degrees Celsius), far above the average of 46 degrees Fahrenheit.

Ellesmere Island was once home to a single enormous ice shelf totaling around 3,500 square miles. All that is left today are the four much smaller shelves that together cover little more than 300 square miles.

Scientists say the shelves, which contain unique microscopic ecosystems that have not yet been studied, will not be replaced because they took so long to form.