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Table of Contents

EUROPE	4
1. German Plan Offering Incentives for Emission Filters Awaiting Signature	4
2. Berlin to Ban Dirtier Vehicles From City Center	4
3. UK Study: Policies "Must Link" Air Quality and Climate	5
4. Provisional 2006 UK Climate Change and Air Pollution Data Released	5
A. Greenhouse gas emissions - provisional 2006 results	5
B. Other atmospheric emissions – 2005 final results	6
1. Sulfur dioxide.....	6
2. Nitrogen oxides.....	7
3. Non-methane volatile organic compounds	7
4. Ammonia.....	7
5. OECD Urges Belgium to Increase Pollution Controls in Agriculture, Transport.....	8
6. EU Study Finds Widespread Excessive Ozone Levels in 2006	9
7. Revised EU National Air Pollutant Caps on the Way.....	9
8. Fuel Additive Risks Must Be Curbed According To EU Study.....	10
9. EU Commission Proposes Unified Diesel Tax to Reduce Energy Use, Emissions	10
10. Taxation Said To Be "Effective" To Achieve EU Green Goals	10
11. EEA Report Quantifies Transport Subsidies	11
12. Iceland Moves Towards CO2-Linked Car Taxes.....	12
13. Belgium to Ban Inefficient Household Appliances, Incentivize Green Cars	12
14. ACEA Says EU States "Still Failing On Car CO2 Taxes"	12
15. EU Car CO2 Emission Limits Unrealistic Says Industry	13
16. Germany's VW, Porsche Defend Environmental Efforts.....	13
17. BMW, Daimler to Co-Develop Hybrids for Premium Cars	14
18. German Automakers to Study Alternative Fuels	15
19. Environmentalists Claim Italians Lag Europe on Environment.....	15
20. Rome Plans Public Transport Switch to Biodiesel	15
21. EU Council Agrees to Targets for Greenhouse Gas Emissions, Renewables.....	16

22.	EU Climate Change Expert Group Holds First Meeting	17
23.	EU Stakeholders Discuss Sustainable Transport	17
24.	Paris Traffic Plan Calls for Steps to Cut Car Use	17
25.	France Aims to Lift Maximum Biodiesel Blend Level	18
26.	London 'Climate Change Action Plan' Offers Measures to Cut Emissions	18
27.	Britain Raises Excise Duty on Most Polluting Cars	19
NORTH AMERICA.....		19
28.	U.S. Proposes Rules to Cut Train, Ship Emissions	19
29.	EPA Proposes Emission Standards for New Nonroad Spark-Ignition Engines	20
	A. Small Nonroad Engines	21
	B. Marine spark-ignition engines and vessels	21
	C. Health and Environmental Benefits	22
30.	EPA Finalizes Renewable Fuel Standard (RFS) Program for 2007 and Beyond	23
	A. Trading Program and Compliance Provisions	23
	B. Impacts	23
31.	Science Advisers Urge Stiffening Of Health Standards for Ozone	24
32.	New 'Warming' Studies May Pressure EPA to Tighten Ozone Air Standard	25
33.	US Air Pollution Down, Air Quality Up Says EPA	26
34.	U.S. GHG Emissions Up 16 Percent since 1990, With Slight Increase in 2005	27
35.	California, United Kingdom to Work On Global Low-Carbon Fuel Standard	28
36.	United States, Canada to Reduce Transborder Particulate Flow	29
37.	Ontario Signals Interest in Joining U.S. Regional Greenhouse Gas Initiatives	29
38.	Ford Recalls Super Duty Trucks after Tailpipe Fires	30
39.	US EPA Adopts Guidance Document for Using Urea-SCR	31
40.	Diesel Soot Filters Urged to Protect US Commuters	31
41.	US House of Representatives OKs Bill to Cut Ship Pollution	32
42.	Limits on Greenhouse Gases from Cars See First Court Test in Vermont	32
43.	Automakers Argue High Court Ruling Nullifies GHG Nuisance Suit	33
44.	New Ethanol 'Low Carbon Intensity' Plant Set To Open In Nebraska	34
45.	Bush, Automakers Promote Alternative Fuel Vehicles	35
46.	Bush Tours GM Plant, Promotes Alternative Fuels	36
47.	Automakers Fight Calls to Boost US Fuel Efficiency	37
48.	Canada to End Oil Sands Aid, Add Green-Car Rebates	38
49.	GM Targets 2010 Production for Electric Car	38
ASIA-PACIFIC.....		39
50.	China Plans More Regular Bans for Big Polluters	39
51.	Beijing Continues Endeavor For Better Air Quality	40
52.	New Chinese Gasoline Standard Released	40
53.	Over 1 Million Automobiles To Be Banned During Olympic Games	43
54.	More Environmental-Friendly Buses to Cut Pollution in Beijing	44
55.	IOC Confident of Environment and Traffic by 2008 Games	44
56.	Alternative Vehicles Showcased In China	45
57.	Hong Kong Advocacy Group Initiates Lawsuit Over Pollution	46
58.	Analysis Of Pearl River Delta Regional Air Quality Monitoring Data Released	46
59.	Japan's Prime Minister Tells Cabinet To Develop Post-2012 Emissions Plans	47
60.	Japan Plans to Boost Production, Use of Biofuels	48
61.	Japanese Report Outlines Costs of Cutting Emissions	48
62.	China to Consider Draft Energy Law This Year	48
63.	Global Warming Takes Toll on China	49
64.	China's Premier: Energy Saving, Pollution Control Targets Must Be Met	49
65.	China to Promote "Green" Autos	51
66.	China's Environmental Law Set for Update	51
67.	COFCO Hopeful for Breakthrough in Cellulose Ethanol	52
68.	China's Long-Awaited Fuel Tax Reform Is Expected To Start In 2008	52
69.	Hangzhou to Adopt China III Standards for New Vehicles	53
70.	Hong Kong Takes Some of the Blame for Pollution	53
71.	Study Says Bad Air Quality Speeds HK Elderly to Hospital	53
72.	Two-Stroke Rickshaws Banned On More Roads in Lahore	54
SOUTH AMERICA.....		55
73.	Brazil Considers Mandatory Biofuel Requirement	55
74.	Brazil-U.S. Renewable Fuels Agreement Aims to Build Global Market for Ethanol	55

75.	Catholic Bishops Slam Brazil Ethanol Growth Plan	56
76.	Peruvian Government Report Urges Improving Air Quality in Lima	57
77.	Argentina Atomic Energy Commission to Develop Hydrogen Fuel	57

GENERAL 58

78.	Honda Wins Title of Cleanest Auto-Maker	58
79.	UNEP Says Developing Nations Act To Slow Warming	58
80.	DaimlerChrysler to Build Test Fleet of Electric Vans	59
81.	Cleaner Fuel for Ships May Raise CO2 Emissions Say Shipping Executive.....	60
82.	CO2 Squares Up With Performance at Geneva Car Show	61

EUROPE

1. German Plan Offering Incentives for Emission Filters Awaiting Signature

Legislation offering tax credits for the installation of diesel vehicle emission filters cleared the Bundestag, Germany's lower house of Parliament, March 1. Bill No. 16/4010 would allow a credit of up to [Euros] 330 (\$435) for vehicle owners who install the device, which reduces emissions by 30 percent, according to the legislation. The legislation offers retroactive credits for cars that were adapted between January 1st, 2006, and April 1st of this year, when the law takes effect. The rule will remain in effect through Dec. 31, 2009.

The credit is expected to equal about half the cost of outfitting the car with the pollution controls. Experts estimate that about 3.5 million diesel vehicles in Germany have not been outfitted with pollution controls.

The Finance Ministry said the proposal would reduce pollution while providing incentives for innovation in auto emissions technology.

In addition to the credit, an additional tax will be levied on cars that are not equipped with the filters. The tax will amount to [Euros] 1.2 per 100 cubic centimeters of vehicle capacity. The tax will stay in effect through March 31, 2011.

On March 9th, the Bundesrat (upper house of Parliament) passed the legislation and it now needs only the president's signature to take effect. The administration estimates that the credits will reduce automobile tax revenue by [Euros] 95 million in 2007 and [Euros] 10 million in 2008.

Separately, German Transportation Minister Wolfgang Tiefensee has proposed changing vehicle taxes so that levies are based on the amount of the vehicle's carbon dioxide emissions, not on the size of the engine, as they are currently. The idea has been praised by business and consumer associations, but all parties involved say there are many technical hurdles to be solved before the proposal can be officially put forward. For example, such a change would have to include a workable method for establishing each individual vehicle's carbon dioxide emissions.

2. Berlin to Ban Dirtier Vehicles From City Center

On March 20th, Berlin's Senate voted to ban vehicles that fail to meet strict emissions standards from entering the city center starting on January 1st, 2008. The move takes advantage of national legislation passed last year establishing a system of color-coded stickers indicating a vehicle's pollution intensity, ranging from green for the cleanest, to yellow, red, and no sticker. Starting in 2008, cars will need to display one of the three stickers to drive within an 88-square-kilometer area in central Berlin. "Many Berlin residents who live on major roads have been waiting since 2005 for a reduction in smog and nitrogen dioxide emissions," Berlin Sen. Katrin Lompscher said. Drivers can outfit their vehicles with filters to reduce emissions and earn a better sticker. Driving in the city center in an unapproved vehicle will result in a [Euros] 40 (\$53) fine and a point against the driver's record. Berlin's vote follows decisions by several states in southern Germany, including Stuttgart and Mannheim, to implement similar restrictions starting this July.

3. UK Study: Policies "Must Link" Air Quality and Climate

Environment policies at European, national and local level must take greater account of the complex interactions between air pollution and climate change according to a new report published by the Air Quality Expert Group (AQEG), a group of experts advising the British government. The group presented recommendations as a follow-up to findings unveiled in 2005. The experts say climate policies should cover air pollutants such as carbon monoxide and nitrogen oxide because they are precursors of the greenhouse gases methane and ground-level ozone. They identify measures benefiting both air quality and climate including reducing transport use.

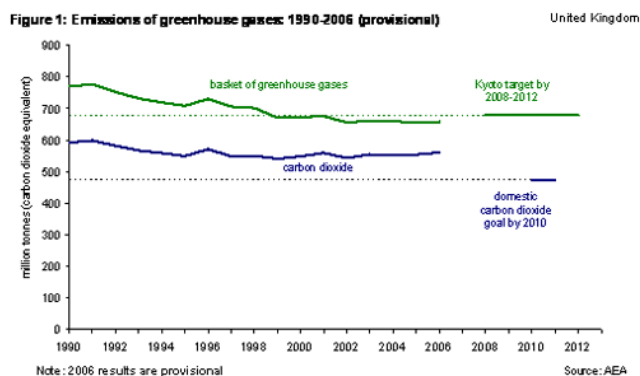
The AQEG report found that:

- Air pollutants such as particulate matter and ozone influence climate change. Control of the gases that lead to the formation of particulate matter and ozone can therefore affect both air quality and climate change. Current international climate change policies do not recognize these impacts.
- Hot summers like the 2003 heat wave are likely to become the norm by 2040, leading to increased summer smogs unless emissions affecting ozone concentrations are substantially reduced. Episodes of winter smog, by contrast, are likely to be less prevalent.
- It is essential that the interlinkages between emissions of air quality and climate change pollutants are recognized in assessments of the impacts of policies and developments for industry, transport, housing etc.
- Most measures that lead to a reduction in demand or an improvement in the efficiency of an activity or product, benefit both air quality and climate change. Such measures should be actively promoted.
- Local, National and European policies must recognize the interactions between air quality and climate change pollutants in developing measures to reduce them.

4. Provisional 2006 UK Climate Change and Air Pollution Data Released

Defra has published provisional 2006 estimates for its climate change sustainable development indicator, as well as final figures for 2005 air pollutant emissions for the UK.

A. Greenhouse gas emissions - provisional 2006 results



It is provisionally estimated that, in 2006, emissions of the total 'basket' of six greenhouse gases covered by the Kyoto Protocol were around 15 per cent below the base year, down from 775.2 to 658.1 million tons carbon dioxide equivalent. (The base year is 1990 for carbon dioxide, methane and nitrous oxide, and 1995 for fluorinated compounds.) To meet its commitment to the Protocol, the UK has agreed to reduce total greenhouse gas emissions by 12½ per cent relative to the base year over the

period 2008-2012.

Net emissions of carbon dioxide during the year have provisionally been estimated at around 560.6 million tons, about 5¼ per cent lower than the 1990 level of 592.1 million tons. Carbon dioxide is the main greenhouse gas, accounting for around 84 per cent of all emissions in the “basket” in 2005, the latest year for which final results are available.

The provisional estimate of 2006 carbon dioxide emissions is around 1¼ per cent higher than the 2005 figure. This increase was primarily as a result of fuel switching from natural gas to coal for electricity generation. This has also resulted in an estimated increase of ½ per cent in emissions from the total basket of gases covered by the Kyoto Protocol for the year.

Aside from the Kyoto target, the UK aims to move towards its own domestic goal of reducing emissions of carbon dioxide by 20 per cent below 1990 levels by 2010. Under the Government’s Climate Change Bill, which is currently at draft stage, it is now also proposed that the UK puts itself on a path towards a legally binding target of a 60 percent reduction in carbon dioxide emissions below 1990 levels by 2050. The Bill also incorporates an interim requirement of a reduction of between 26 and 32 per cent over the period 2018-2022.

The European Union is currently committed to reducing greenhouse gas emissions to 20 per cent below 1990 levels by 2020 across all member states, and has undertaken to achieve a 30 per cent reduction by 2020 if this was part of a wider international agreement.

B. Other atmospheric emissions – 2005 final results

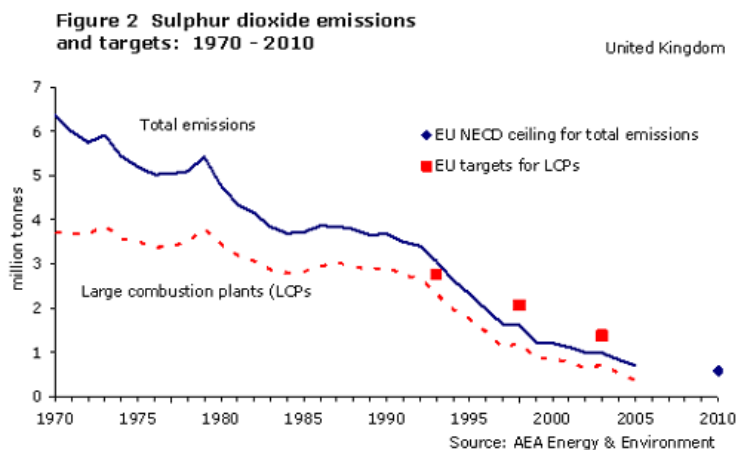
Defra also published the first results from the UK atmospheric emission inventory for 2005 for air pollutants other than greenhouse gases. It shows a long term trend of a reduction in air pollutant emissions in all of the pollutants in the inventory.

Emissions of all of the gases covered in the Air Quality Strategy have continued to fall between 2004 and 2005.

Emissions of the majority of metals remain relatively stable with some rises relating to changes in fuel use.

Persistent organic pollutants emissions show falls in all of the pollutants between 2004 and 2005, except for Hexachlorobenzene (HCB) emissions from pesticide use which show no change.

Reducing emissions of these pollutants is important because of the effects they have on human health or on natural ecosystems. Results for emissions covered by the EU National Emissions Ceilings Directive (NECD) are shown below:



1. Sulfur dioxide

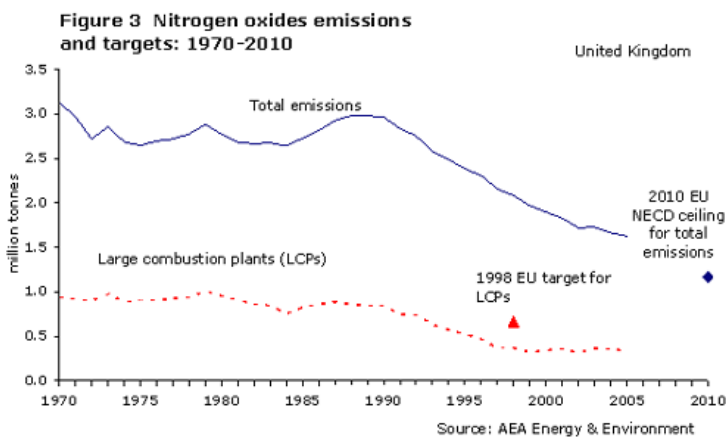
Total emissions of sulfur dioxide fell by 81 per cent between 1990 and 2005 from 3.7 to 0.7 million tons. The UK is committed to further reductions to approximately 0.6 tons by 2010 under the EU NECD.

The main source of emissions is coal use in power stations and other industries.

2. Nitrogen oxides

Total nitrogen oxides emissions fell by 45 per cent between 1990 and 2005 from 3.0 to 1.6 million tons. The UK is committed to further reductions to approximately 1.2 million tons by 2010 under the EU NECD. Road transport is the largest source of emissions of nitrogen oxides accounting for 42 per cent of the total in 2005.

3. Non-methane volatile organic compounds



Emissions of non-methane volatile organic compounds (NMVOCs) fell by 59 per cent between 1990 and 2005, from 2.4 million to 1.0 million tons. This is below the target from the EU NECD for the UK to reduce emissions to 1.2 million tons by 2010. Road transport, solvent use, leakage from gas and oil extraction and distribution are the primary sources of NMVOC emissions.

4. Ammonia

Ammonia emissions fell by 17 per cent between 1990 and 2005 from 383 thousand to 318 thousand tons. This compares with the target for 2010 of 297 thousand tons under the EU NECD. Ninety per cent of total ammonia emissions in 2005 were from agriculture.

Emissions totals for these and other air pollutants are summarized in the following table:

Air pollutant emissions on a UNECE basis: 1970 - 2005									
	Units	1970	1980	1990	2000	2003	2004	2005	Percentage change 1990 to 2005
Main air pollutants									
Sulfur dioxide	kt	6370	4775	3687	1215	991	836	706	-81%
Nitrogen oxides	kt	3130	2772	2966	1897	1728	1664	1627	-45%
Non-methane volatile organic compounds	kt	1923	2097	2386	1338	1064	1009	977	-59%
Ammonia	kt	..	..	383	343	313	318	318	-17%
Particulates (PM10)	kt	499	349	305	184	155	154	150	-51%
Carbon monoxide	kt	12108	9137	8229	4239	2947	2711	2417	-71%
Hydrogen chloride	kt	333	306	270	85	42	30	21	-92%

Hydrogen fluoride	kt	14	12	10	4	6	5	5	-51%
Benzene	kt	48	46	56	18	15	15	14	-75%
1,3-Butadiene	kt	9	10	12	5	3	3	3	-78%
Metals									
Arsenic	t	..	56	47	20	15	15	14	-69%
Cadmium	t	..	29	24	6	3	4	4	-84%
Chromium	t	..	186	160	73	41	39	36	-78%
Copper	t	..	161	144	80	64	65	60	-58%
Mercury	t	..	43	38	9	8	7	8	-80%
Nickel	t	..	581	334	104	68	84	87	-74%
Lead	t	..	8306	2912	165	130	134	118	-96%
Selenium	t	..	98	89	45	41	47	49	-46%
Zinc	t	..	1047	1013	635	501	513	461	-55%
Persistent Organic Pollutants (POPs)									
Polycyclic aromatic hydrocarbons (PAHs)	T	..	..	7795	1823	1425	1325	1248	-84%
gamma HCH	T	..	..	99	33	19	17	14	-85%
PCP	T	..	..	751	605	508	476	451	-40%
HCB	kg	..	..	3515	325	329	850	851	-76%
PCBs	kg	..	..	6580	1304	1106	1087	1028	-84%
Dioxins and furans	g	..	..	1112	229	202	230	205	-82%

5. OECD Urges Belgium to Increase Pollution Controls in Agriculture, Transport

Belgium has taken strong steps to improve environmental policies over the past decade, but further efforts are needed to improve performance in the agricultural, energy, and transport sectors, according to a report issued March 26th by the Organization for Economic Cooperation and Development.

The report draws a direct connection between increased spending on pollution abatement and control--which now represents 1.7 percent of gross domestic product annually--and the generalized decline in air and water pollution seen in recent years. While OECD recognizes that funding increases and greater attention to environmental policy have led to improvements, it notes that a series of indicators show that "the results are not sufficient."

Topping the list of OECD policy recommendations are proposals to curb air pollution from both residential sources and the transport sector. Belgium could limit transport-based particulate emissions by tightening fuel quality control and increasing inspections of diesel vehicles, while stricter emission ceilings on a range of other airborne pollutants would reduce ozone episodes and improve urban air quality, OECD said.

OECD also calls for further improvements to Belgian climate change policy. OECD notes that Belgium has reduced carbon dioxide emissions and is prepared for participation in the EU Emission Trading Scheme, but points out that it could still do more to reduce both energy and carbon intensity across the economy. Belgium should integrate its climate change objectives into national energy policy, notably with regard to energy pricing and fuel choices, OECD said.

6. EU Study Finds Widespread Excessive Ozone Levels in 2006

Ozone levels last summer regularly exceeded European Union health protection targets, the European Environment Agency said on March 15th. The highest levels--up to three times the target value--were recorded in Austria, France, Italy, Portugal, Romania, and Spain. Overall, the frequency of instances of excessive amounts of ground-level ozone in southern and northwestern Europe was the second highest in the last decade. Only 2003 saw higher levels. Ozone pollution in the Union "has not changed consistently" since 1995, EEA said, noting that warm summers in recent years are "substantially" linked to higher ozone levels. EEA's findings are included in a report that compiles information from EU member states as required by the EU Directive on Ozone in Ambient Air (2002/3/EC).

The EU's alert threshold of 240 micrograms per cubic meter (ug/m³) was exceeded 190 times in 2006, compared with 127 in 2005 and 99 in 2004. However, this still pales in comparison with the 720 exceedences reported in 2003 linked to that summer's damaging heat wave.

In addition, the information threshold value of 180 ug/m³ was exceeded at 56 per cent of 2,000 monitoring stations in 2006, versus 42 per cent in 2005 and 35 per cent in 2004. The highest recorded ozone level was in Italy at 370 ug/m³.

The EU target value of 120 ug/m³ - which member states must try to reach by 2010 - was breached at most stations. At 42 per cent of them there were more than 25 exceedences of this value, up from 30 per cent in 2005.

The report notes that ozone pollution remains a problem despite cuts in emissions of ozone precursors over the past decade. The phenomenon has been "substantially induced" by climatic variability, with hot dry summers causing increased ozone levels, it says.

7. Revised EU National Air Pollutant Caps on the Way

The European commission is planning to propose fresh national caps on emissions of five air pollutants in July according to reports. The caps will come in a revision of the national emission ceilings (NECs) directive, as announced under the Cafe thematic strategy on air pollution last year.

Last year the Cafe strategy proposed deep EU cuts in emissions in the four pollutants covered by the NECs directive - sulfur dioxide, nitrogen oxides, volatile organic compounds (VOCs) and ammonia. Under the law EU member states must keep emissions within certain limits by 2010. The new proposal will set targets for 2020 and is likely to include first-ever national caps on emissions of fine particulate matter, PM_{2.5}. A revision of EU air quality rules currently underway will set parallel limits on ambient concentrations of PM_{2.5}.

The targets will be set in a complex burden-sharing arrangement which weighs the cost-effectiveness of reduction measures in each state.

8. Fuel Additive Risks Must Be Curbed According To EU Study

Extra EU measures are needed to limit the risks to surface and ground waters from the fuel additive TAME, an official risk assessment has concluded. Measures are also needed to prevent Tame rendering drinking water distasteful in the event of leaks from storage tanks, it concluded. Graeme Wallace of the European fuel oxygenates association (Efoa) said that in practice measures already taken or under preparation for the similar additives ETBE and MTBE would be sufficient to control risks from TAME.

9. EU Commission Proposes Unified Diesel Tax to Reduce Energy Use, Emissions

On March 13th, the European Commission published proposals to raise the minimum excise duty on diesel fuel in the European Union to [Euros] 380 (\$501) per 1,000 liters, saying the move will reduce energy consumption and environmental damage. The increase will take effect from 2014, with an intermediate step of [Euros] 359 per 1,000 liters in 2012. The current duty is [Euros] 302.

EU Taxation Commissioner László Kovács said the move would reduce "fuel tourism." "This proposal would help the environment by reducing the unnecessary kilometers driven by truck drivers just to benefit from low taxes on gas oil," Kovács said in a statement.

While the problem of "tank tourism" has been a phenomenon associated with Luxembourg because its fuel excise taxes and VAT rates have been the lowest in the EU, and therefore attract motorists and truckers from France, Germany, and the Netherlands, it is now a much bigger concern because many of the new member states in Eastern Europe and along the Baltic Sea have much lower rates than their neighbors. Based on a recent commission study, Germany is losing as much as [Euros] 2 billion (\$2.6 billion) a year in tax revenue because truckers are taking long detours to Poland and other countries to fill up on cheap fuel.

Most EU member states from Western Europe already have rates higher than those in the commission proposal.

One of the most outspoken opponents of Kovacs's proposal is European Budget Commissioner Dalia Grybauskaite of Lithuania. Lithuania is particularly concerned that if it is forced to raise fuel prices, its hope to adopt the euro and become the 14th member state in the European Monetary Union would be jeopardized. One of the key criteria for joining the euro zone includes having a low inflation rate. In early 2006, Lithuania was declared ineligible to join the euro zone because its inflation rate was too high.

Since Grybauskaite has raised objections, other commissioners have also raised concerns, including Danuta Huebner (regional affairs) of Poland, Siim Kallas (administrative affairs) of Estonia and Viviane Reding (Media and Information Society) of Luxembourg.

The proposal must be approved unanimously by EU member states in the Council of Ministers.

10. Taxation Said To Be "Effective" To Achieve EU Green Goals

Taxation is a powerful and effective instrument that can help achieve the EU's new "ambitious" objectives on energy and climate change at minimum costs, EU tax commissioner Laszlo Kovacs said at the launch of an annual tax forum in Brussels. Mr. Kovacs said he intended to concentrate on further developing energy taxation at EU level during the second half of his mandate.

Mr. Kovacs wants to launch a discussion on possible ways forward in a green paper on market-based instruments being drafted under the lead of environment commissioner Stavros Dimas. This discussion could lead to a legislative proposal as part of a revision of the 2003 energy tax directive. Although collective decision-making on tax matters is difficult because it requires unanimous agreement among EU governments, Mr. Kovacs told the forum he believed this should not be an insuperable obstacle if the EU was serious about its environmental objectives.

The tax forum is intended to give new impetus to EU tax policy. The topic of the first meeting was sustainable development, which reflects the importance given to this issue by EU leaders earlier this month. At a summit meeting they called for all relevant policy instruments to be used to support the EU's green objectives.

Other speakers at the forum included Mr. Dimas and German finance minister Peer Steinbrück. Mr. Dimas said that market-based instruments such as taxation were the most direct and transparent way to implement the polluter-pays principle.

European environment agency director Jacqueline McGlade called for green tax reform in Europe to "realign an economy that is still characterized by insufficient use of labor resources and an excessive use of natural resources". Ms McGlade argued that a tax shift from labor to the environment has begun in sectors like agriculture, transport and energy, but that a great deal remained to be done to make them sustainable.

11. EEA Report Quantifies Transport Subsidies

The European transport sector receives annual subsidies worth an estimated E270-290bn, according to a new report issued by the European environment agency. The report gathers data from a wide range of studies to provide a comprehensive comparison for different modes of transport. It estimates that road transport receives almost half of total subsidies at E125b. Rail (E73b) and air (E27-35b) follow, with water transport ranked lowest at E14-30b.

Subsidies are categorized into "on budget subsidies" which include financial support coming directly from public funds and "off-budget subsidies" such as fuel tax and VAT exemptions. Transport modes varied on how they were subsidized. For instance, road transport benefited more from direct infrastructure subsidies while air was supported by fuel tax rebates.

The report concludes that environmental objectives are "not a significant motivation" for the majority of subsidies. However it explains that not all subsidies are environmentally harmful, highlighting those for rail which lead to a modal shift away from aviation.

Last month, the EEA emphasized the importance of internalizing the external costs of transport in its latest "Term" report on the sector. Reducing these significant transport subsidies was highlighted as one of the options to achieve this.

12. Iceland Moves Towards CO2-Linked Car Taxes

Iceland looks set to base all vehicle taxes on carbon dioxide emissions, following recent recommendations by senior officials of six ministries. A hearing on the plan is imminent.

The committee made its proposals in February. One-off registration taxes and annual circulation taxes would both be related to CO2 in a linear manner - so that a vehicle emitting no CO2 would pay no tax. The changes would be budget neutral.

In the longer term, the committee said, a system of nationwide road pricing based on satellite tracking should be introduced to generate funds earmarked for maintaining the road network. In the meanwhile, a portion of fuel taxes should be more clearly designated for this purpose.

13. Belgium to Ban Inefficient Household Appliances, Incentivize Green Cars

The Belgian government has approved what is thought to be the first national ban on less energy-efficient household appliances. The move will affect goods normally guaranteed free market access under EU internal market rules. The plan was passed along with a set of green fiscal measures aimed at cutting greenhouse gas emissions and balancing its budget and will affect packaging, cars and housing.

Private car buyers will get a 15 per cent rebate for purchases of cars emitting less than 105 grams per kilometer, and a 3 per cent rebate up to 115g/km. Drivers fitting particle filters to their cars will get an E200 rebate. Sales of second-hand diesel vehicles without a particle filter will be banned from July.

Taxation and insurance of company cars will be reformed to favor lower-carbon vehicles. All fuel stations will have to offer biodiesel by January 2008 and petrol with some biofuel content by January 2009. Rebates for buyers of solar panels and low-energy "passive houses" will be increased.

14. ACEA Says EU States "Still Failing On Car CO2 Taxes"

EU countries are still failing to send clear market signals in favor of lower CO2-emitting cars, carmakers have complained. Sector group ACEA called for harmonized taxation across the EU to encourage consumers to purchase lower-emission vehicles.

According to a new survey by ACEA, only 11 of the EU's 27 member states now have some linkage to CO2 emissions in their national car tax systems, though this is up from just nine a year ago. Where there are linkages to CO2, these vary enormously in design. Some countries link only one-off registration taxes to CO2 while others link only annual circulation taxes. Even within each category almost no system is alike. Furthermore, the difference in tax paid by high and low CO2-emitting vehicles is generally relatively small (see table below).

Annual tax payable on petrol cars in selected countries
Rated emissions: 120g/km 200g/km Differential

	120g/km	200g/km	Differential
Luxembourg	E108	E340	3.1
UK	E59	E278	4.7
Sweden	E71	E200	2.8

France E480 E3,000 6.3

Source: ACEA

According to ACEA, all this significantly impedes carmakers ability to sell low-CO2 vehicles. "Manufacturers face a fragmented EU market and are unable to exploit economies of scale", it explains.

The association called for all existing taxes to shift towards circulation taxes, in line with a directive proposed in 2005 but stalled in the council of ministers due to national sensitivity to EU involvement in tax measures.

CO2 should be the "key criterion" in setting tax rates, the group added. In addition, every gram of CO2 emitted should be taxed the same amount, so avoiding arbitrary thresholds - no existing national CO2-lined tax complies with this principle currently.

15. EU Car CO2 Emission Limits Unrealistic Says Industry

The European Automobile Manufacturers' Association (ACEA) has criticized the European Commission's new limits on carbon dioxide emissions from cars as prohibitively expensive and unrealistic. The EU's executive Commission proposed carmakers be required to reduce carbon dioxide (CO2) emissions from new cars sold in Europe to an average 130 grams per kilometer by 2012. But Sergio Marchionne, chief executive of Italian car maker Fiat and head of the ACEA, told a business seminar: "It is prohibitively expensive to achieve a target of 130 grams per km through vehicle technology only. It is unrealistic that this can be done by 2012. The announced legislative framework will not be ready before 2009. This leaves the industry too little time to apply it by 2012. The cars of 2012 are being designed today," he said.

ACEA represents manufacturers including BMW, DaimlerChrysler, Porsche, Fiat and Renault.

The Commission's proposal is part of the European Union's efforts to fight climate change.

16. Germany's VW, Porsche Defend Environmental Efforts

Germany's Volkswagen and Porsche have said they are committed to making environmentally-friendly cars, despite a report showing carbon dioxide (CO2) emissions of newly-registered cars in Germany fell only 0.5 percent in 2006. Chief executives of both firms defended their green credentials in separate interviews released a few days before the Geneva car show.

VW CEO Martin Winterkorn told Germany's Spiegel magazine that each VW model series would have an eco-version in future. "We call it Blue Motion. We've begun with the Passat and the Polo. We'll continue with the Golf," he said.

The VW Polo 1.4 TDI PD Blue Motion is ranked the world's ninth-most environmentally sound car by Swiss Transport Club VCS, based on emissions of CO2, pollutants and noise. The greenest model is judged to be the Honda Civic 1.3i-DSI Hybrid, with the top eight in the Club's list occupied by Japanese or French carmakers. Automakers in Germany do not offer a single such hybrid, which combine electric motors and batteries with standard combustion engines to cut fuel consumption.

Winterkorn said VW's Audi brand had been too early to market with its Audi duo hybrid series in the 1990s. "At that time the market was obviously not yet ripe. We only sold a few hundred of them," he said. Volkswagen had the first of a new set of hybrid cars undergoing tests now and the first models should be on the market next year, he added.

He defended VW's 12-cylinder diesel Bugatti sports car, which he said would use an average 11.9 liters of fuel per 100 kilometers when it comes onto the market. That compares with 4.6 liters per 100 kilometers for the Honda Civic Hybrid. "Is that a catastrophe? Should we all drive Trabis in future?" he asked, referring to the two-cylinder Trabant cars which were a symbol of communist East Germany.

Asked about European Union proposals to cut CO2 emissions, Winterkorn said he would favor limits set by vehicle class rather than by manufacturer. "We could live with that," he said.

Porsche CEO Wendelin Wiedeking also defended his company's green record. "We are not waste merchants," he told the Frankfurter Allgemeine Sonntagszeitung in an interview. "None of my customers has to apologize for driving a Porsche," he said.

The sports car firm planned to start selling a hybrid version of its Cayenne offroader by the end of the decade, he said. This would use less than 9 liters of fuel per 100 kilometers, he said, compared with 12.9 liters for the current version.

Wiedeking said the EU's emission-cutting proposals would put top-end carmakers such as Porsche out of business if they were applied uniformly to all automakers, forcing German carmakers to produce only small cars at best. "We already once had Trabi-dominance in one part of Germany. Socialism would then find a joyful resurrection on our street," he said.

17. BMW, Daimler to Co-Develop Hybrids for Premium Cars

German carmakers BMW and DaimlerChrysler have agreed to co-develop hybrid transmission systems for rear-wheel-drive premium cars. The accord on so-called "mild hybrids" aims to start rolling out products within the next three years, they said in a statement, citing benefits of sharing costs, combining know-how and reaping economies of scale once the hybrids go on sale.

The move reflects German carmakers' grudging acceptance that hybrids -- long dismissed as a fad in German boardrooms but made successful by Japan's Toyota Motor Corp -- appeal to consumers, especially given worries about global warming.

The project complements a three-way alliance with General Motors to develop "full" hybrids that link an electric motor and batteries to a standard combustion engine.

A mild hybrid can boost acceleration and make engines work more efficiently in stop-and-go traffic. It costs less than a full hybrid, which can cut fuel consumption by a fifth but adds thousands to the price of a car. But mild hybrids do not offer the same fuel savings as a full hybrid and cannot run on battery power alone.

A BMW spokesman said the project would focus at first on petrol hybrids, given the better potential for fuel savings compared with diesel engines, but added that both petrol and diesel hybrids would be considered.

GM is set to start selling full-sized sport utility vehicles with full hybrid technology in late 2007, followed by Dodge Durango full-sized SUVs amid a range of other models. Daimler's Mercedes-Benz is eyeing a full hybrid launch shortly thereafter. BMW plans a full hybrid within three years.

18. German Automakers to Study Alternative Fuels

On March 8th, German automakers agreed to research and develop alternative fuel technologies with the objective of reducing automobile carbon dioxide emissions by 10 grams per kilometer by 2012. "We've agreed that great efforts are needed in the automotive industry if carbon dioxide emissions are to sink," German Environment Minister Sigmar Gabriel said about the agreement. Parties to the agreement said it would both help the environment and create new jobs. The agreement is intended to help automakers meet EU targets for reducing automobile carbon dioxide emissions to 120 grams per kilometer by 2012.

19. Environmentalists Claim Italians Lag Europe on Environment

Italians' love of cars and their reluctance to switch from carbon fuels for energy needs means their country is one of the worst environmental performers in Europe, according to one of Italy's main green groups. The home of Ferrari and Fiat is more car-mad than any other in Europe, the Legambiente group said, quoting figures showing Italians drive an average 15,000 kilometers (9,300 miles) each year -- 31 percent more than the European average and 60 percent more than the average German.

"The diagnosis on Italy's health is not encouraging, in particular when it comes to two infrastructure areas: energy and transport," said the green group as it issued an annual report of the state of the nation's environment.

On energy, Italy, which has little oil or gas of its own, still gets 88 percent of its energy by burning fossil fuels. Renewables account for less than 6 percent, and most of that is hydro-electric power, with wind and solar power making up just 0.3 percent, way behind countries like Germany and Spain.

Italy's emissions of greenhouse gases -- blamed for global warming -- have risen 12.1 percent since 1990, rather than heading towards the 6.5 percent reduction that, under the Kyoto Protocol, it has pledged to reach in the period 2008-2012. The rise was due to increases in transport and energy both of which consume fossil fuel and emit CO₂.

20. Rome Plans Public Transport Switch to Biodiesel

Rome plans to switch its public transport to a fuel mix containing 20 percent biodiesel as the ancient city choking on car exhaust fumes aims to cut air pollution and join global efforts to fight climate change. The city council, regional administration and farm groups have signed an accord to create a local chain to produce biodiesel, a green fuel made mainly from vegetable oils, for buses in Rome, the council said in a statement. If tests involving about 200 buses proved successful, then Rome's entire fleet of about 2,800 public buses would use a 20 percent biodiesel fuel mix by the end of 2008, city council and farm officials said.

The project would cut carbon dioxide (CO₂) emissions -- widely believed to contribute to global warming -- by 40,000 tons a year, Italy's biggest utility Enel said in a separate statement. Enel would join the project by using biomass produced from vegetable oils to fuel its power plants.

Local farmers would boost the area planted to oilseeds -- rapeseed, sunflower and soy -- for energy use from an experimental 400-500 hectares to 10,000 hectares and then possibly add another 10,000 hectares to meet growing biodiesel demand.

The project could face fiscal hurdles because Italy had yet to define planned tax incentives aimed at boosting the biofuels industry, but high production costs might be trimmed if all biodiesel was produced locally, the official said.

21. EU Council Agrees to Targets for Greenhouse Gas Emissions, Renewables

On March 9th, European Union member states fully endorsed European Commission plans for expanding renewable energy production and cutting greenhouse gas emissions by up to 30 percent by 2020. The agreement was reached by the European Council, which brings together prime ministers and presidents from the 27-member bloc and which has final executive authority within the EU system.

The Commission had proposed the targets in January as part of what it labeled "an integrated energy and climate change package to cut emissions for the twenty-first century".

The targets for 2020 include:

- a 20 percent reduction in greenhouse gas emissions compared to 1990 levels to be achieved unilaterally by the EU, rising to 30 percent if comparable commitments are made by other leading emitters;
- a 20 percent reduction in EU energy consumption to be achieved through energy-efficiency measures;
- an increase in renewable energy production to 20 percent of overall EU energy consumption; and
- an increase in biofuel use to 10 percent of EU vehicle fuel consumption.

German Chancellor Angela Merkel, whose country holds the rotating EU presidency through June, told reporters that the targets were "ambitious and credible" and were designed to limit the rise in global average temperatures to 2 degrees Celsius.

The goal for renewables to make up 20 percent of the overall EU energy mix by 2020 has been the target of more opposition than the other objectives. Germany strongly supported a binding target, but other countries called for a flexible approach, such as one that would allow countries to take their baseline positions into account when setting national targets.

The issue of how to account for nuclear power has also been a subject of contention. French President Jacques Chirac said, "The burden-sharing on renewables must take account of the place of low-carbon energy, nuclear, and clean coal in our national energy choices." However, speaking after the Council, Merkel said, "It is important that renewables are renewables and nothing else."

Merkel said the European Council had passed back to the Commission the responsibility to resolve these issues and to work out individual national renewables targets.

In agreeing to a binding target for renewables, member states went further than expected. EU energy ministers meeting Feb. 16 in the Energy Council--part of the preparation for the European Council--had held back from supporting the Commission's call for a binding target, saying only that there should be a "commitment" to reach a 20 percent share.

22. EU Climate Change Expert Group Holds First Meeting

On March 6th, European Commission president Jose Manuel Barroso hosted the first meeting of a high-level expert group convened to advise on European Union climate change and energy policy. The group will provide a "contribution to our thinking," Barroso told reporters after the meeting in Brussels. Members of the group said participants had discussed the Commission's proposals for an international target for a 30 percent cut in carbon dioxide emissions by 2020 compared to 1990 levels, climate change technology and research, and the EU's role as a leader in formulating global policy. Barroso said the focus on research underscored the need for a European Technology Institute, which the Commission proposed early last year. The institute could establish a "knowledge community" to study energy policy, energy security, and climate change, Barroso said. The expert group has eleven members, including International Energy Agency Director Claude Mandil, BP Chairman Peter Sutherland, and Nicholas Stern, author of the Stern Review on climate change. Barroso said the group will meet again in the near future, probably in Berlin.

23. EU Stakeholders Discuss Sustainable Transport

EU experts and policy makers have met to discuss technological and policy solutions to reduce emissions of air pollutants and greenhouse gases from transport, particularly road transport. Gathered at a two-day international conference on sustainable transport held by the EU's joint research center in Milan, stakeholders launched two research projects expected to provide a key contribution towards reducing emissions in this sector.

Keynote speakers included EU research commissioner Janez Potocnik and environment commissioner Stavros Dimas. The meeting was attended by ministers from several member states including German environment minister Sigmar Gabriel.

Called Traenvia, the first project is intended to compare environmental and socio-economic impacts of different transport modes along a busy trans-European corridor running from Lisbon to Kiev. Seven member states are taking part in the project.

The second project will be carried out in the Italian region of Lombardy. It will lay the groundwork for the assessment of various technological options to reduce air pollutant emissions from transport.

More broadly, the European commission will be spending E4bn for transport research over the next seven years under the 7th research framework program. A call for proposals on a number of topics is currently open until May.

24. Paris Traffic Plan Calls for Steps to Cut Car Use

On February 12th, the Paris City Council adopted a new long-term traffic management plan that calls for a 40 percent reduction in vehicle use in the French capital by 2020. The traffic management plan (Plan de Deplacements, or PDP) suggests that promoting public transport as an alternative to private vehicle use could curb carbon dioxide emissions in Paris by up to 60 percent from today's levels. The traffic management plan, passed by the Socialist-Green Party dominated City Hall, will now be the subject of a public inquiry that is expected to last throughout 2007. It then must pass a final vote, which is not expected to take place before municipal elections slated for early-2008.

25. France Aims to Lift Maximum Biodiesel Blend Level

France will probably raise the maximum level of biodiesel that can be blended with standard diesel within a few months, a move key to reaching the country's ambitious biofuel targets, a farm ministry official said. "We are working on a rise of the blending ceiling. If we raise it to seven percent we should be able to meet the 5.75 percent target," Bernard Chaud, biofuel specialist at the farm ministry, told the press. France, the second biggest European producer of biodiesel after Germany, has set a goal for biofuels to account for 5.75 percent of calorific value of fall fuels sold in the country by the end of next year and seven percent in 2010.

Biofuel industry players have praised the objective, which goes beyond targets set by the European Commission. But they have said a strong obstacle is presented by current EU legislation that limits to five percent the volume of biofuel that can be directly blended with fuels.

Because biofuels have less calorific value than fossil fuels, the volume of biofuel sold will need to amount to 6.6 percent of all fuels -- above the current ceiling -- in order to reach 5.75 percent in calorific value, biodiesel makers said.

Diesel currently sold in gas stations contains nearly four percent biodiesel by volume, often without consumers being aware of this. All biodiesel sold in France is directly blended with standard diesel, a fuel used by around 70 percent of cars.

26. London 'Climate Change Action Plan' Offers Measures to Cut Emissions

On February 27th, Mayor Ken Livingstone introduced a plan to make London "the world's greenest city" by implementing a number of initiatives to reduce carbon dioxide emissions. According to the mayor's London Climate Change Action Plan, London currently produces 8 percent of U.K. carbon emissions or 44 million tons each year, and without concerted reduction measures this could reach 51 million tons by 2025.

The plan calls for making housing, transportation, and energy generation more efficient and for making businesses more conscious of their emissions with a view to reducing carbon dioxide emissions 4 percent per year to 60 percent below 1990 levels by 2025.

It calls for subsidizing insulation in residential homes; for a program to certify and reward environmentally friendly businesses and government agencies; and for substantially boosting the capacity of renewable energy generation and combined cooling, heating, and power generation (CCHP).

Livingstone said, however, that the plan could not succeed without the cooperation of the national government and the voluntary efforts of Londoners. The plan itself states that "the difficult truth is that we have been unable to present any realistic scenario in which we can achieve the 2025 target without a small number of key national regulatory and policy changes."

According to the mayor, existing regulations "do not ensure that the costs of carbon emissions are taken into account in setting the price of most products and services" and that this leads to "insufficient financial incentives" for businesses and individuals to take the necessary steps to cut carbon.

27. Britain Raises Excise Duty on Most Polluting Cars

Britain has raised taxes on the most polluting cars in an effort to entice drivers away from gas-guzzling vehicles which damage the environment. Finance minister Gordon Brown said in his 11th and probably last budget the excise duty on heavily polluting vehicles would rise to 300 pounds from 210 pounds in 2007 and again to 400 pounds in 2008. The duty on more environmentally friendly cars such as the hybrid Toyota Prius was frozen at 30 pounds.

Brown, who is expected to succeed Prime Minister Tony Blair in coming months, last raised the vehicle excise duty in March 2006 but ignored pleas from environmentalists for a further hike in the pre-budget report in December.

Britain's political parties have been vying for the environmental spotlight in part to tap into growing public concern about the dangers of climate change.

NORTH AMERICA

28. U.S. Proposes Rules to Cut Train, Ship Emissions

The United States has proposed new regulations that would cut diesel particulate emissions from trains and ships by 90 percent over the next decade. The regulations would begin to roll out in 2008, with final rules hitting in 2015-2017, the Environmental Protection Agency said. Emissions of nitrogen oxide would also be cut.

"By tackling the greatest remaining source of diesel emissions, we are keeping our nation's clean air progress moving full steam ahead," EPA Administrator Stephen Johnson told reporters at a commercial port in New Jersey. Johnson said the program would cost industry about US\$600 million in 2030 but result in health care savings of approximately US\$12 billion by that time. (This benefit estimate is based on a new methodology that OMB imposed on EPA and which drastically lowered the estimated benefits compared to the methodology used by EPA in the past.)

The rules for ships apply to U.S.-flagged or U.S.-registered vessels, but not long-haul commercial liners.

U.S. ships and trains, which would account for the bulk of diesel soot pollution by 2030 if the rules did not go into effect, will start using ultra-low sulfur diesel fuel by 2012.

The rules would call for old locomotives to start using new emissions technology between 2008 and 2010, and newly manufactured train and ship engines to apply the standards starting in

2009. By 2014, marine diesel engines would be required to use new highly efficient catalytic converters, with locomotive diesel engines following in 2015.

Key elements of the proposal include:

It applies to:

- All new marine diesel engines below 30 liters/cylinder displacement (C1 and C2 engines) (not ocean-going vessels) and
- All new and most remanufactured locomotives.

The emissions requirements are:

- Remanufactured locomotives must meet tighter limits on remanufacture as soon as certified remanufacture systems are available, as early as 2008 but no later than 2010 (2013 for Tier 2 locomotives).
- New locomotive and C1 and C2 marine diesels must meet near-term Tier 3 emission standards that reflect engine modifications.
- New locomotives and large (above 800hp/600kw) C1 and C2 marine diesels must meet long-term Tier 4 emissions standards that reflect high-efficiency catalytic after-treatment technologies.
- Also, new and remanufactured locomotives must install idle controls.

The Locomotive standards are:

- For Remanufactured locomotives—as soon as soon as certified remanufacture systems are available, 50-60% PM reduction, 15-20% NOx reduction (Tier 0 only); as early as 2008, no later than 2010 (2013 for Tier 2 locomotives).
- For New locomotives, Tier 3 requires a 50% PM reduction; 2011 for switcher locos, 2012 for line-haul and passenger locos and Tier 4 requires a 90% PM and 80% NOx reduction by 2015, except 2017 for NOx for line-haul and passenger locomotives.
- Idle Controls are required on new Tier 3 and Tier 4 locomotives and on remanufactured locomotives; auto stop/start system required; APUs encouraged

The Marine Diesel standards are:

- For New engines, Tier 3 requires a 50% PM reduction and a 20% NOx reduction; C1—2009 to 2012; C2—2013-14 and Tier 4, which only applies to engines over 600 kw requires a 90% PM reduction and an 80% NOx reduction; phased in from 2014 to 2017.
- EPA is also requesting comment on whether to regulate certain remanufactured large marine diesels by installing certified emission control system on remanufacture—if available, beginning in 2008 with high-sales volume engine models being required to meet specified emission standards when remanufactured, beginning in 2013 (at least 25% reduction)

By 2030, EPA estimates that national NOx emissions will be reduced by 765,000 tons and PM2.5 by 28,000 tons. This will prevent 1500 premature deaths and provide other health benefits producing annual savings of \$11-12 billion (vs. cost of ~\$600 million); this works out to a benefit-to-cost ratio of about 20 to 1.

29. EPA Proposes Emission Standards for New Nonroad Spark-Ignition Engines

The U.S. Environmental Protection Agency (EPA) has proposed exhaust emission standards for marine spark-ignition engines and small land-based nonroad engines. EPA is also proposing

new evaporative emission standards for equipment and vessels using these engines. These standards would apply only to newly manufactured products.

The new standards for emissions of hydrocarbons (HC), nitrogen oxides (NO_x), and carbon monoxide (CO) address a variety of nonroad engines, equipment, and vessels; these products have been combined into one proposal because these engines and vehicles share many common characteristics.

- **Small Nonroad Spark-Ignition Engines and Equipment:** Spark-ignition (SI) nonroad engines rated below 25 horsepower (19 kW) used in household and commercial applications, including lawn and garden equipment, utility vehicles, generators, and a variety of other construction, farm, and industrial equipment.
- **Marine Spark-Ignition Engines and Vessels:** Spark-ignition engines used in marine vessels, including outboard engines, personal watercraft, and sterndrive/inboard engines.

The engines and vehicles covered by this proposal account for about 25 percent of mobile source hydrocarbon emissions and 30 percent of mobile source carbon monoxide emissions.

A. Small Nonroad Engines

EPA has proposed HC+NO_x exhaust emission standards of 10 g/kW-hr for Class I engines starting in the 2012 model year and 8 g/kW-hr for Class II engines starting in the 2011 model year. It expects manufacturers to meet these standards by improving engine combustion and adding catalysts.

For spark-ignition engines used in marine generators, EPA is proposing a more stringent Phase 3 CO emission standard of 5 g/kW-hr. This would apply equally to all sizes of engines subject to the Small SI engine standards.

EPA is also proposing new evaporative emission standards for both handheld and nonhandheld equipment. The new standards include requirements to control fuel tank permeation, fuel line permeation, and diffusion emissions. For nonhandheld engines EPA is also proposing to require control of running losses.

When fully implemented, the proposed standards will result in a 35 percent reduction in HC+NO_x exhaust emissions from new engines and a 45 percent reduction in evaporative emissions.

B. Marine spark-ignition engines and vessels

EPA is proposing a more stringent level of emission standards for outboard and personal watercraft engines starting with the 2009 model year. The proposed standards for engines above 40 kW are 16 g/kW-hr for HC+NO_x and 200 g/kW-hr for CO. For engines below 40 kW, the standards increase gradually based on the engine's maximum power. EPA expects manufacturers to meet these standards with improved fueling systems and other in-cylinder controls.

EPA is also proposing new exhaust emission standards for sterndrive and inboard marine engines. The proposed standards are 5 g/kW-hr for HC+NO_x and 75 g/kW-hr for CO starting with the 2009 model year. EPA expects manufacturers to meet these standards with three-way

catalysts and closed-loop fuel injection. To ensure proper functioning of these emission control systems in use, EPA is also proposing a requirement that engines have a diagnostic system for detecting a failure in the emission control system. For sterndrive and inboard marine engines above 373 kW with high-performance characteristics (generally referred to as "SD/I high-performance engines"), EPA is proposing a CO standard of 350 g/kW-hr as well as a variety of other special provisions for these engines to reflect unique operating characteristics and to make it feasible to meet emission standards using emission credits.

The emission standards described above relate to engine operation over a prescribed duty cycle for testing in the laboratory. EPA is also proposing "not-to-exceed" standards that require manufacturers to maintain a certain level of emission control when engines operate under normal speed-load combinations that are not included in the certification duty cycle.

EPA is also proposing new standards to control evaporative emissions for all vessels using marine spark-ignition engines. The new standards include requirements to control fuel tank permeation, fuel line permeation, and diurnal emissions, including provisions to ensure that refueling emissions do not increase.

When fully implemented, the proposed standards would result in a 70 percent reduction in HC+NOx emissions, and a 20 percent reduction in CO from new engines' exhaust and a 70 percent reduction in evaporative emissions.

C. Health and Environmental Benefits

EPA estimates that by 2030, the proposed standards would result in significant annual reductions of pollutant emissions from regulated engine and equipment sources nationwide, including 630,000 tons of volatile organic hydrocarbons, 98,000 tons of NOx, 6,300 tons of direct particulate matter (PM2.5) emissions and 2.7 million tons of carbon monoxide. By 2030, on an annual basis, these emission reductions would prevent 450 PM-related premature deaths, approximately 500 hospitalizations, 52,000 work days lost, and other quantifiable benefits every year. The total estimated annual benefits of this rule in 2030 are approximately \$3.4 billion. Estimated costs in 2030 are many times less at approximately \$240 million.

The proposal is groundbreaking in several areas. To meet the new exhaust emission standards, manufacturers are expected to use catalytic converters for the first time ever in many types of small watercraft, lawn, and garden equipment. After rigorous analysis and extensive work with diverse stakeholders, EPA determined that such a strategy was feasible and safe. This proposed rule also includes the first ever...

- Fuel evaporative standards for all the types of equipment and watercraft covered in the rulemaking
- National standards for vessels powered by sterndrive or inboard engines and
- Carbon monoxide standards for gasoline-powered engines used in recreational watercraft

Americans spend more than three billion hours per year using lawn and garden equipment. Currently, a push mower emits as much hourly pollution as 11 cars and a riding mower emits as much as 34 cars.

Additionally, recreational watercraft can emit as much as 348 cars an hour.

30. EPA Finalizes Renewable Fuel Standard (RFS) Program for 2007 and Beyond

The U.S. Environmental Protection Agency (EPA) has established a national renewable fuel program (the Renewable Fuel Standard Program, or RFS program) designed to encourage the blending of renewable fuels into the nation's motor vehicle fuel. This rule establishes the annual renewable fuel standards, responsibilities of refiners and other fuel producers, a trading system and other compliance mechanisms, and record keeping and reporting requirements.

The Energy Policy Act of 2005 amended the Clean Air Act to establish a Renewable Fuel Standard program. The U.S. Congress gave EPA the responsibility to coordinate with the U.S. Department of Energy, the U.S. Department of Agriculture, and stakeholders to design and implement this first-of-its-kind program. Three months after the Energy Policy Act of 2005 was signed, in December 2005, EPA set a statutory default standard that required that 2.78 percent of the gasoline sold or dispensed in calendar year 2006 be renewable fuel. The final rulemaking establishes a comprehensive RFS program for 2007 through 2012 and beyond.

A renewable fuel is defined in the Energy Policy Act as a motor vehicle fuel that is produced from plant or animal products or wastes, as opposed to fossil fuel sources. Renewable fuels include ethanol, biodiesel and other motor vehicle fuels made from renewable sources. The program grants credit for both renewable fuels blended into conventional gasoline or diesel and those used in their neat (unblended) form as motor vehicle fuel.

Any party that produces gasoline for use in the U.S., including refiners, importers, and blenders (other than oxygenate blenders), is considered an obligated party under the RFS program. All obligated parties are expected to meet the renewable fuel standard beginning in 2007, with two important exceptions. First, small refiners and small refineries are exempt from meeting the renewable fuel requirements through 2010. Second, all gasoline producers located in Alaska, Hawaii, and noncontiguous U.S. territories are exempt from the RFS program indefinitely. These states and territories may opt into the program, however, and all of the refiners (except for small refiners and refineries), importers, and blenders located therein will then be subject to the renewable fuel standard.

A. Trading Program and Compliance Provisions

The trading program allows obligated parties to comply with the annual renewable fuel standard through the purchase of renewable identification numbers (RINs) even if they cannot or do not wish to blend renewable fuels into gasoline. It also permits renewable fuels that are not blended into gasoline, such as biodiesel and biogas, to participate in the RFS program. This rule specifies who can generate RINs and under what conditions, how RINs may be transferred from one party to another, and the appropriate value of RINs generated from different types of renewable fuel.

The RFS program specifies compliance and enforcement provisions, such as for facility registration, record keeping and reporting requirements, program enforcement, and various fuel tracking mechanisms. These provisions will enable the RIN trading program to function properly and will ensure an adequate foundation for Agency enforcement efforts.

B. Impacts

The RIA provides an analysis of the energy, emissions, air quality, and economic impacts of expanding the use of renewable fuels in comparison to a reference case of 4 billion gallons of renewable fuel use which represents 2004 conditions projected out to 2012. Depending on the volume of renewable fuel anticipated to be used in 2012, EPA estimates that this transition to renewable fuels will reduce petroleum consumption between 2.0 and 3.9 billion gallons or roughly 0.8 to 1.6 percent of the petroleum that would otherwise be used by the transportation sector.

With regard to emissions impacts, carbon monoxide emissions from gasoline-powered vehicles and equipment will be reduced between 0.9 and 2.5 percent. Emissions of benzene (a mobile source air toxic) will be reduced between 1.8 and 4.0 percent. Further, the use of renewable fuel will reduce carbon dioxide equivalent greenhouse gas emissions between 8.0 and 13.1 million metric tons, about 0.4 to 0.6 percent of the anticipated greenhouse gas emissions from the transportation sector in the United States in 2012.

At the same time, other vehicle emissions may increase as a result of greater renewable fuel use. Nationwide, EPA estimates an increase in total emissions of volatile organic compounds and nitrogen oxides (VOC + NOx) between 41,000 and 83,000 tons. However, the effects will vary significantly by region. Areas that already are using ethanol will experience little or no change in emissions or air quality. However, those areas that experience a substantial increase in ethanol may see an increase in VOC emissions between 4 and 5 percent and an increase in NOx emissions between 6 and 7 percent from gasoline powered vehicles and equipment.

The societal cost to produce a gallon of gasoline is estimated to rise between 0.5 cent and 1.1 cents, though the presence of the excise tax credit for ethanol will result in a net savings for fuel customers at the pump of 0.4 to 0.7 cents per gallon. Net U.S. farm income is estimated to increase by between \$2.6 and \$5.4 billion.

31. Science Advisers Urge Stiffening Of Health Standards for Ozone

U.S. EPA's top science advisers have unanimously agreed that the agency should adopt a more exacting health standard for ground level-ozone, citing concerns that the air pollutant is posing inordinate risks to children, the elderly and others vulnerable groups. Specifically, the Clean Air Science Advisory Committee will press EPA Administrator Stephen Johnson to revise the ozone health standard from the current 0.084 parts per million (ppm) to between 0.070 ppm and 0.060 ppm.

While EPA staff had recommended tightening the health standard in its final staff review on ozone released in January, the agency proposed a higher upper-end range of "somewhat below 0.080 parts per million to 0.060 parts per million." The air science advisers, who met by conference call, found the staff recommendation insufficient and will recommend in a letter to Johnson that he set the new primary health standard at no higher than 0.070 ppm.

While generally praising EPA's work on reviewing ozone's health impacts, several committee members said they were perplexed by the agency's final recommendation and sought clarification from agency officials. Karen Armstrong, director of EPA's Office of Air Quality Planning and Standards, said agency scientists were reluctant to draw "a bright line" on the issue, particularly with respect to the upper ranges of safe ozone concentrations. Rather, she said, EPA staff sought to "present the broadest array of policy options that could be justified by the science."

A final decision on a new health standard for ozone rests with Johnson, who has until June 20 to accept or reject his staff's advice. Any final change to the NAAQS would come in March 2008. The science advisers will submit their concerns to Johnson in a formal letter to be presented in the coming weeks.

Rogene Henderson, CASAC's chairwoman, noted that the committee was unanimous in its opinion that the ozone standard should be tightened to 0.070 ppm. The group also will recommend that EPA do more research on the effects of "photochemical oxidant mixtures," a broader group of pollutants that includes ozone.

32. New 'Warming' Studies May Pressure EPA to Tighten Ozone Air Standard

New evidence that global warming worsens ozone pollution and its associated health effects may add pressure on EPA to propose tightening its national ambient air quality standard (NAAQS) for ozone when it formally proposes a plan in June. The studies -- still in draft form and discussed at a Health Effects Institute (HEI) conference April 15th -- may also help end lingering doubts about how a warmer climate may exacerbate ozone pollution, often referred to as a "climate penalty," and also how ozone pollution can contribute to global warming.

EPA is set to soon propose whether to strengthen the ozone NAAQS amid calls from the agency's staff and scientific advisory committee for EPA to issue a tighter limit based on scientific evidence not including the latest climate data.

Lydia Wegman, a top career staffer in EPA's air office, is stressing the need for the agency to tighten the current NAAQS for ozone in order to reduce risks to human health. But Wegman, an official with the agency's Office of Air Quality Planning & Standards, says the requirement that a NAAQS be set with an "adequate margin of safety" requires a policy judgment by the agency administrator. "There are risks associated with just meeting the current standard, and a significant reduction in risk can be achieved by tightening the standard," Wegman told the conference.

At the HEI conference, Daniel Jacobs of Harvard University presented studies that are still in preparation showing the link between the effects of ozone and climate change. The formation of ground-level ozone is strongly correlated to temperature, because high temperatures lead to ozone-forming emissions. High temperatures are associated with increased energy use and they also speed up chemical transformation processes that create ozone, he explained. But even as heat increases the production of ozone, ozone also traps heat and holds it in a stagnant air mass, Jacobs said.

A statistical analysis of the predicted climate change impacts on air quality in the Northeast, with ozone-forming nitrogen oxides (NOx) emissions at constant levels, found that the days exceeding current federal air quality limits would double simply as a result of climate change, according to the Harvard study.

The study also looks at the "climate change penalty" on reducing ozone-forming emissions in the midst of warming, and found: "We would need to reduce NOx emissions by 50 percent instead of 40 percent to achieve the same air quality goals in the Northeast."

“We think this is a very robust result,” Jacobs said. The findings are due mainly to a prediction that warming changes the circulation in the atmosphere, and would increase stagnation events that are associated with high heat days and formation of ground-level ozone.

A separate study presented at the HEI conference by UK researchers predicted a 50 percent increase in deaths attributable to ozone due to climate change.

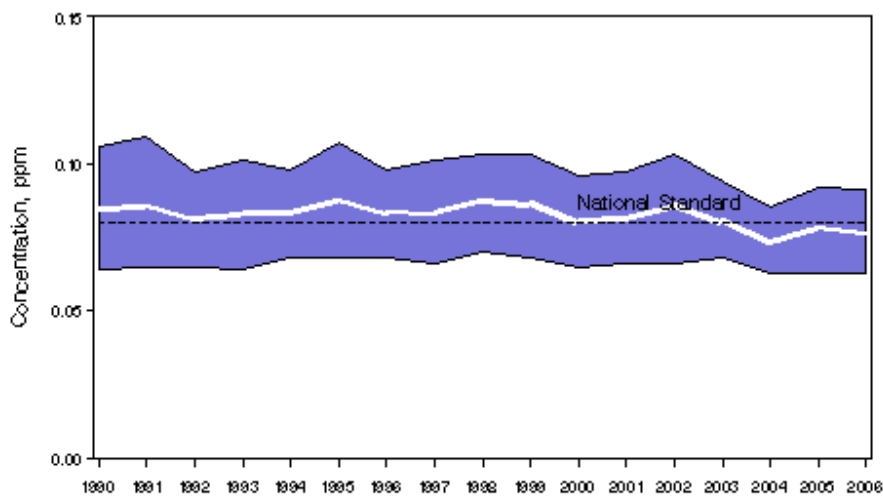
33. US Air Pollution Down, Air Quality Up Says EPA

An early look at air quality and emissions data for 2006 shows continued improvement in the nation's air quality over the long term, EPA reports. Emissions of six key pollutants have dropped by more than half since 1970 and the national average concentration for each criteria pollutant is below the level of its air quality standard.

Total emissions of the six key pollutants dropped 54 percent between 1970 and 2006. During the same time period: the U.S. gross domestic product increased 203 percent, vehicle miles traveled increased 177 percent, energy consumption increased 49 percent, and U.S. population grew by 46 percent. In addition, emissions of air toxics in 2002 were 35 percent lower than 1990 levels.

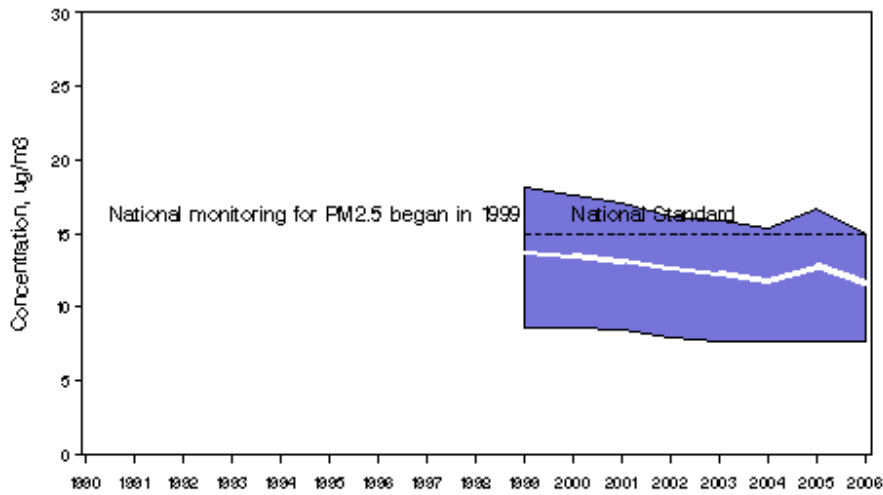
Under the Clean Air Act, EPA sets national air quality standards for six key pollutants, including nitrogen dioxide, ozone, sulfur dioxide, particulate matter and lead. Each year, EPA examines the levels of these pollutants in the air and the emissions from various sources to see how both have changed over time and to summarize the current status of air quality. While national average concentrations of the six key pollutants are below national standards, results vary by site. Annual pollution levels at some monitoring sites do remain above one or more of the national air quality standards, with ozone and particulate matter remaining as the most persistent problems.

Ozone Air Quality, 1990 — 2006
(Based on Annual 4th Maximum 8—Hour Average)
National Trend based on 588 Sites



1990 to 2006 : 9% decrease in National Average

PM2.5 Air Quality, 1999 — 2006
 (Based on Seasonally-Weighted Annual Average)
 National Trend based on 750 Sites



1999 to 2006 : 15% decrease in National Average

34. U.S. GHG Emissions Up 16 Percent since 1990, With Slight Increase in 2005

U.S. emissions of carbon dioxide and other greenhouse gases have increased 16.3 percent since 1990 and increased 0.8 percent in 2005, the most recent year for which data is available, the Environmental Protection Agency said in a February 20th report. The 16.3 percent increase in the nation's greenhouse gas emissions was largely a reflection of economic growth, measured at 55 percent over the same 16-year period, the report said.

U.S. emissions of the six main greenhouse gases--carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride--totaled 7,262 million metric tons in 2005, up from 7,203 million metric tons in 2004, according to the report, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005.

EPA's greenhouse gas inventory provides the most up-to-date estimates of U.S. emissions over the 16-year period and includes data on the amount of carbon dioxide and other greenhouse gas emissions that are absorbed or stored in various "sinks" such as farmland, forestland, and trees in urban areas, EPA said. Those areas offset 11 percent of U.S. total greenhouse gas emissions in 2005, the report said.

It is the fourth consecutive year U.S. greenhouse gas emissions have increased, with EPA reporting a 0.3 percent increase for 2002, a 0.6 percent increase for 2003, a 1.7 percent increase in 2004, and a 0.8 percent increase in 2005.

EPA said the 0.8 percent increase between 2004 and 2005 emissions was a reflection of the nation's strong economic growth in 2005, which fueled higher overall demand for electricity. A warmer summer in 2005 also drove up electricity demands, the report said, but a surge in greenhouse gas emissions was tempered by higher fuel prices and a warmer winter.

By far, the primary greenhouse gas emitted by various human activities in the United States--mostly the burning of fossil fuels for electricity, transportation, and manufacturing processes--is carbon dioxide, the EPA report said. Carbon dioxide makes up 83.9 percent of total U.S. greenhouse gas emissions, it said. "The largest source of [carbon dioxide], and of overall greenhouse gas emissions, was fossil fuel combustion," the report said, accounting for 94 percent of its carbon dioxide emissions in 2005.

Globally, the United States accounts for about 22 percent of carbon dioxide emissions.

U.S. carbon dioxide emissions have steadily increased since 1990, although emissions of methane and nitrous oxide have declined over the same period. From 1990 to 2005, total U.S. emissions of carbon dioxide have increased by 20.3 percent, while methane emissions declined 11.5 percent and nitrous oxide emissions fell 2.8 percent.

U.S. methane emissions have steadily declined since 1990, in part due to capture of the gas from landfills to use for power production and from replacement of leaking natural gas pipelines. Nitrous oxide emissions have declined in part due to newer pollution control technologies in automobiles and other vehicles.

35. California, United Kingdom to Work On Global Low-Carbon Fuel Standard

California and the United Kingdom want to collaborate on developing a low-carbon standard for transportation fuels, California Environmental Protection Agency (Cal-EPA) Undersecretary Dan Skopek told the press on April 4th. The goal is to develop a single methodology that could be used by "all the world's fuel suppliers" to calculate greenhouse gas emissions associated with individual fuels, from production all the way through use, Skopek said.

Skopek and other California officials met with U.K. officials on April 3rd and 4th as part of a seven-day trip to Europe to study climate change policies, particularly emissions trading programs. Previously, the delegation visited with officials at U.N. Framework Convention on Climate Change offices in Bonn and with European Union officials in Brussels.

California, the United Kingdom, and the European Union all are looking at alternative fuels, particularly biofuels, as options for reducing carbon dioxide and other emissions linked to global warming.

In January, California Gov. Arnold Schwarzenegger (R) issued an executive order requiring a 10 percent cut in the carbon intensity of transportation fuels by 2020, equivalent to about 13 metric tons of greenhouse gas emissions. Under the standard, fuel suppliers would be able to reformulate fuels or purchase credits to offset emissions.

The California Air Resources Board must implement the standard by the end of 2008.

University of California researchers are developing protocols for the "life-cycle carbon intensity" of the fuels. CARB is expected to review those in June.

European Union officials proposed a similar low-carbon fuel standard Jan. 31.

Skopek said the California-U.K. collaboration on a low-carbon fuel standard falls under the scope of a pact Schwarzenegger and British Prime Minister Tony Blair signed in August 2006. The memorandum of understanding included a commitment to work together on evaluating and developing climate change policies and technologies.

California law (A.B. 32) enacted in September 2006 requires the state to implement programs to cut greenhouse gas emissions by about 25 percent--to levels that existed in 1990--by 2020. A related executive order Schwarzenegger signed in October calls for a market-based greenhouse gas emissions program compatible with the EU Emissions Trading System (ETS) and one being developed in the northeast United States through the Regional Greenhouse Gas Initiative (RGGI).

36. United States, Canada to Reduce Transborder Particulate Flow

On April 13th, US Environmental Protection Agency Administrator Stephen Johnson and Canadian Environment Minister John Baird announced that the United States and Canada will negotiate an agreement to reduce the transboundary flow of particulate matter pollution. The agreement will be an annex to the U.S.-Canada Air Quality Agreement established in 1991 to reduce the cross-border flow of air pollution that causes acid rain and to foster greater scientific cooperation.

In 2000, the nations agreed to an annex addressing the cross-border flow of ozone. The agreement required the United States to continue implementing a series of ozone-control measures that it had already initiated.

Particulate matter is linked by EPA to thousands of premature deaths annually. Studies have linked particulate matter, especially fine particles, to cardiac and respiratory diseases such as asthma, bronchitis, and emphysema and to various forms of heart disease.

A report issued by the United States and Canada in 2004 said particulate matter pollution in both countries was due in part to emissions from across the border. EPA said that reducing transboundary particulate matter transport also would reduce acid rain and regional haze that harms visibility in communities along the border.

37. Ontario Signals Interest in Joining U.S. Regional Greenhouse Gas Initiatives

On March 30th, Ontario Premier Dalton McGuinty said he is interested in the province joining regional climate change initiatives being developed by several U.S. states. "Building partnerships with our U.S. neighbors to address our shared climate change and air pollution issues is in the best interest of Ontarians," McGuinty said in a statement.

The announcement drew positive reactions from the governors of U.S. states involved in regional greenhouse gas mitigation programs.

Ontario's participation in the U.S. Regional Greenhouse Gas Initiative would reflect the fact that global warming does not recognize international boundaries, New York Gov. Eliot Spitzer (D) said on March 30th in a joint statement with McGuinty. "Ontario and New York may be separated by a border, but we are united in a common cause to seek solutions to this most pressing challenge," Spitzer said.

California Gov. Arnold Schwarzenegger (R) also welcomed as "terrific news" Ontario's consideration of participating in the Western Regional Climate Action Initiative. "This interest from Ontario, along with California's agreements with the United Kingdom, western and northeastern states, and others will continue to inspire other states, provinces, and countries to join the fight against global warming," Schwarzenegger said in the joint statement.

Ontario Environment Minister Laurel Broten noted that the province's commitment to phasing out coal-fired electricity generation is compatible with the focus in the Regional Greenhouse Gas Initiative on reducing emissions from the electricity sector. In addition, Ontario supports the absolute emissions targets in both U.S. regional programs, she said.

Cooperation with the U.S. initiatives could lead to technical improvements in the province's emissions trading programs for nitrogen oxides and sulfur dioxide, and potentially to the creation of cross-border trading of all emissions, Broten said. "This is an important undertaking in our government's comprehensive strategy on climate change," she said.

38. Ford Recalls Super Duty Trucks after Tailpipe Fires

Ford Motor Co. announced it was recalling over 37,000 of its new 2008 model-year F-Series Super Duty trucks after reported tailpipe fires in the diesel version of the pickups. Ford said it had received reports of three cases where leaking fuel or oil ignited when trapped in a diesel particulate filter near the tailpipe of the new trucks.

In one case in Texas, a truck's hot tailpipe set off a grass fire when the driver pulled off the road, a Ford spokesman said. The fire was quickly extinguished, and no injuries or accidents have been reported as a result of the incidents.

The recall represents the second glitch since their January launch of the new Super Duty trucks.

The heavy-duty work truck is one of the automaker's most profitable vehicles and its sales success has been seen as key as Ford tries to rebound from a \$12.7 billion loss last year.

Navistar International Corp. briefly halted shipments of the diesel engines for the new trucks to Ford in late February because of a contract dispute, although both sides have since been meeting under court order to resolve the matter.

Ford dealers have been advised to stop selling the roughly 29,000 Super Duty trucks with 6.4-liter diesel engines on their lots until engine control software can be updated. Super Duty trucks still awaiting shipment from the Louisville, Kentucky plant that makes them will have their engine control software updated there. Customers with the first 8,400 diesel Super Duty trucks already on the roads will be notified that they should bring their vehicles into dealerships for the same fix. Ford will send out a recall notice to customers in early April and dealers may contact them before then to alert them to the potential problem.

Gasoline-powered versions of the Super Duty and previous model-year diesel trucks with 6.0-liter or 7.3-liter engines are not affected by the recall.

The software upgrade will reset the powertrain control module on the Ford trucks. In cases where the system detects unusually high temperatures in the diesel particulate filter the control

module will power down the vehicle. The aim is to allow drivers to pull safely to the side of the road to allow it to cool before proceeding.

39. US EPA Adopts Guidance Document for Using Urea-SCR

The US EPA has finalized its guidance document for using SCR technology for NO_x control in light- and heavy-duty diesel vehicles and engines. The document opens the door for the introduction of SCR technology in Tier 2 light-duty vehicles, 2010 heavy-duty engines, and in other future diesel engine applications in the United States.

EPA considers urea replenishment to be a scheduled maintenance item, which is allowed to occur at an interval of no less than 100,000 miles in light-duty vehicles and 150,000 miles in heavy-duty vehicles. Since urea in SCR systems would have to be replenished at intervals on the order of 10,000 miles, a special permission must be granted by the EPA to allow the increased maintenance frequency.

In vehicles with adjustable parameters that can affect emissions the EPA is allowed to test the vehicle over the full range of the adjustable parameter. In SCR-equipped vehicles, the EPA considers urea level to be an adjustable parameter. Thus, manufacturers must ensure in their SCR system design that the operation of the vehicle with an empty reducing agent tank is impossible. The EPA acceptance criteria for the adjustable parameter include vehicle compliance (vehicles must not be operated without urea) and urea availability (drivers must be able to find urea when they need it).

The vehicle compliance criteria are divided into: (1) driver warning system, (2) driver inducement, (3) identification of incorrect reducing agent, (4) tamper resistant design, and (5) durable design. The driver warning system must include a dashboard indicator (separate from the existing "check engine" light) which is activated and gradually escalates before the urea tank becomes empty. In case the urea tank becomes empty, the driver inducement system will ensure that users replenish urea. An example driver inducement strategy is to limit the number of engine restarts once urea reaches a certain minimum level. Some form of vehicle performance degradation can be also used as a driver inducement strategy. The identification of incorrect reducing agent must ensure that the urea tank is filled with the correct urea solution. This can be achieved through the use of NO_x emission sensors or urea quality sensors.

To address urea availability, the EPA requires that manufacturers prepare plans for urea availability and accessibility. The reducing agent should be available (1) at dealerships, (2) at truck stops, and (3) a back-up must exist such as a toll-free number that the customers can call if they are unable to locate a source of urea.

40. Diesel Soot Filters Urged to Protect US Commuters

Filters should be placed on millions of old diesel engines to protect Americans who breathe large amounts of health damaging soot particles during their daily commutes, according to a clean air group. The Clean Air Task Force report said that up to 70,000 peoples' lives in the United States are shortened by fine particulates. Tiny soot particles from sources including diesel engines can cause lung cancer, asthma, and heart problems, according to peer-reviewed studies.

The CATR found that fine particulate levels in four US cities were four to eight times higher along commuter routes than the average air quality in those cities.

It said filters can help improve the air quality. "The good news is that affordable technology is available today that can virtually eliminate commuter exposure to diesel particles on the road," the report said.

Since the beginning of the year, the US government has required trucks fresh off the assembly line to add diesel particulate filters, which combined with recently required cleaner fuels, cut particulates by 90 percent compared to old engines.

But the CATR said 13 million engines on the road before this year still spew the particulates.

The CATR said since shipping trucks travel across the states, the federal Environmental Protection Agency should require long-haul trucks to add controls whenever the engines are rebuilt. Some of those trucks are driven 1 million miles before they are replaced, but their engines are rebuilt more frequently.

41. US House of Representatives OKs Bill to Cut Ship Pollution

The US House of Representatives has approved legislation to cut polluting emissions spewed by ships powered by diesel fuel. Under the bill, the US Coast Guard and Environmental Protection Agency would be given the authority to develop and enforce emission limits on the thousands of domestic and foreign-flagged vessels that enter US waters each year. The legislation would bring US ship emission standards and requirements in line with pollution regulations followed by other countries.

Those regulations were adopted by the International Maritime Organization in 1997 to limit sulfur dioxide and nitrogen oxide emissions from ship exhausts that deplete the Earth's ozone. The organization's regulations entered into force internationally in 2005 and the US Senate adopted the treaty the following year.

Ocean-going vessels produce more sulfur dioxide emissions than all the world's cars, trucks and buses combined, according to a new report from the International Council on Clean Transportation, made up of transportation and air quality officials and experts from around the world. The study shows that the sulfur content of marine fuel is far greater than highway diesel fuel. Ships use fuel with an average sulfur content of 27,000 parts per million (ppm) compared to just 10 to 15 ppm for road fuels in Europe, Japan and the United States.

Rep. James Oberstar, the bill's co-sponsor, said he hoped the US Senate would quickly pass the House legislation and send it to President George W. Bush to sign into law.

42. Limits on Greenhouse Gases from Cars See First Court Test in Vermont

An upcoming trial in Vermont will be the first court test of the California standard regulating greenhouse gases from automobiles. The trial is moving ahead after a judge denied a request by the state to stay the case pending the outcome of the Supreme Court's decision on whether EPA has the authority to regulate carbon dioxide (CO₂) from tailpipes. Judge William Sessions, Chief Judge of the U.S. District Court of Vermont, reasoned that the trial should move forward in order to set down a full record of the complex issues involved in the arguments, given that the

case will likely be appealed to the U.S. Court of Appeals for the 2nd Circuit regardless of the outcome. The trial is currently set for April 9th, and is expected to last three weeks, according to local reports.

“It’s a case, obviously, that is going to the 2nd Circuit. And I was, quite frankly, persuaded at the very beginning . . . that this is a situation that should involve a full record so that the appellate courts would be in a better position to resolve these issues,” Sessions said in the final pretrial conference March 2nd in Burlington, Vermont.

A similar lawsuit in California has been stayed pending the outcome of the Supreme Court case, Commonwealth of Massachusetts et al. v. EPA, over EPA’s authority and obligation to regulate carbon dioxide (CO₂) from automobiles. A third lawsuit is pending in Rhode Island.

The Vermont case is being widely watched as it is the first in the nation to go to trial over a standard that eleven states have so far adopted, including New Jersey, Connecticut, Rhode Island, New York, Oregon, Washington, Massachusetts, Vermont, Maine, Pennsylvania and Maryland.

Vermont sought to have the suit dismissed on the grounds that until EPA grants California a waiver on the matter, the issues in the case are unripe. EPA has said it will wait until the outcome of Massachusetts v. EPA before it makes a decision on California’s waiver.

In Green Mountain Chrysler-Plymouth-Dodge et al v. Crombie et al, four automobile dealerships, the Alliance of Automobile Manufacturers, DaimlerChrysler Corporation and General Motors Corporation are suing three Vermont air officials who were primarily responsible for adopting the standard. The Conservation Law Foundation and other advocacy groups, as well as states including New York and California, are helping to defend Vermont’s position.

The plaintiffs argue that California’s regulation of CO₂ from car emissions is unlawful, because there is no technology to control CO₂ from the tailpipe, and the only way to reduce CO₂ emissions is through increased fuel efficiency. The authority to set such a standard is given to the National Highway Traffic Safety Administration (NHTSA) under the Energy Policy and Conservation Act (EPCA), according to the industry brief. The automobile industry cites EPCA’s preemption provision that denies states the ability to adopt separate fuel economy standards.

But Vermont says that EPCA “requires NHTSA to consider ‘the effect of other motor vehicle standards of the Government on fuel economy’ when it sets corporate average fuel economy (CAFE) standards,” the Vermont brief says. The state argues that the vehicle emissions standards for which EPA grants waivers become “other motor vehicle emissions standards of the Government” under EPCA, and NHTSA thus must take them into account when establishing CAFE standards.

While executives from GM and DaimlerChrysler testified on Capitol Hill March 14 that they would back a cap-and-trade greenhouse gas emissions plan, they signaled opposition to increased CAFE standards as a way to reduce those emissions.

43. Automakers Argue High Court Ruling Nullifies GHG Nuisance Suit

A landmark U.S. Supreme Court decision authorizing the U.S. EPA to regulate carbon dioxide (CO₂) emissions as a pollutant under the Clean Air Act should quash California’s “nuisance”

lawsuit against automakers, industry attorneys assert in a new motion. However, the attorney general's (AG) office says it reads the high court opinion as backing its case, and intends to continue pursuing the case.

On April 3rd, attorneys representing automakers filed a motion asking the U.S. District Court for the Northern District of California to allow them to make a new case why the September 2006 case should be dropped. The automakers filed the motion just a day after the Supreme Court ruled in *Massachusetts v. EPA* that EPA has authority to regulate CO₂.

The AG asserts that emissions from vehicles made by the automakers -- including General Motors Corp., Ford Motor Co., Nissan North America, Honda North America, Chrysler Motors Corp. and Toyota Motor North America, Inc. -- are a "nuisance." The office asks for about \$1 billion in damages, due to a perceived link between automobile emissions and global warming impacts, such as decreased mountain snowpack and increased flooding and wildfire danger.

But the Supreme Court ruling upends the nuisance claim, and "directly supports defendants' arguments in favor of dismissal in this case," the automakers' attorneys maintain in their motion.

Essentially, the fact that the federal government now must regulate CO₂ renders moot the AG's nuisance claim, because nuisance statute only applies where federal law does not or cannot apply, the motion states. The ruling means a common-law suit is not "the only way that California can have its voice heard," as the motion quotes an argument by the AG.

Further, the motion asserts the state's attempts to regulate global warming are now "preempted" by the Supreme Court ruling. The state should fight global warming and make other efforts to question federal GHG priorities via "procedural channels," such as petitioning the federal government, because U.S. officials have the sole authority to regulate global warming, the motion asserts. This assertion is based on the assumption that California filed the nuisance case in part to spur federal action to regulate GHG emissions.

44. New Ethanol 'Low Carbon Intensity' Plant Set To Open In Nebraska

An ethanol plant using a unique, new technology that will arguably give it the lowest carbon input of any plant currently in commercial production is scheduled to open April 19th, according to a company principal. The plant, part of E3Biofuels, is located in Mead, NE and is based on a technology that replaces almost all of its fossil fuel input with methane extracted from the waste of a co-located cattle feedlot. Short of commercially viable cellulosic ethanol, the output of the Mead E3Biofuels plant could become the gold standard for a greenhouse gas regime, such as is being instituted in California based on carbon intensity, the so-called Low-Carbon Fuel Standard.

The E3Biofuels plant is located adjacent to a 28,000 head cattle feedlot operation. The cattle are housed on slatted floors. Their manure is flushed to the ethanol plant and into an aerobic digester where methane is extracted. The methane is used to produce the heat required in the various processes for refining corn into ethanol. By using waste produced methane, the plant uses virtually no fossil fuel in the production process.

In addition to extremely low carbon intensity in the ethanol production process, the plant is also able to reduce costs by not having to dry the distiller's grain left from the corn fermentation

process. Instead the wet distillers' grain is sent to the nearby feedlot and fed to the cattle, and the closed-loop cycle starts again.

California's approach to reducing greenhouse gases will take every fuel source, including ethanol, and assign it a value for its carbon intensity. With this approach all ethanol is not created alike. In fact, a fact sheet explaining the California program shows that an ethanol plant that uses coal-generated electricity as its heat source would have a higher carbon intensity than gasoline. Ethanol produced in a plant, such as the E3 facility, that uses little or no fossil fuel would likely have lower carbon intensity than other existing commercial ethanol plants. The California plan allows companies to trade carbon credits; using E3-produced ethanol could generate more of these credits than other ethanol sources.

A principal with the company says the 24-million gallon plant is the first of at least four in various stages of development. Two more plants using the same technology are expected to break ground later this year -- one as early as June -- according to the company official. The three plants will be significantly larger than the initial plant, two with capacities of 100-million gallons of annual production capacity and a third with 50-million gallons of annual capacity.

Because of the novel technology and potential to significantly reduce not just the carbon signature of traditional corn-ethanol production but the cost of production as well, given the high cost of natural gas, the April 19th opening is expected to be attended by political dignitaries. Last year the site of the plant was used as a backdrop for an event by U.S. EPA Administrator Steven Johnson.

Low-production cost could become more critical as the rapid expansion of the ethanol industry over the past few years may lead to surpluses as the 10-percent gasoline additive market becomes saturated and the growth of an E-85 (85 percent ethanol, 15 percent gasoline) market fails to keep up with supply. Low-cost producers would be less affected by prices that could fall below production costs of other producers.

Another factor playing into the economics of ethanol production is the historically high price of corn, which has doubled in the past year, from less than \$2 a bushel to more than \$4 a bushel. Here again, a low-cost producer would be in a better position to weather the higher feedstock costs.

45. Bush, Automakers Promote Alternative Fuel Vehicles

President Bush wants market-based solutions for boosting alternative fuel use in the US automobile industry, not new regulation according to Detroit-based automakers. The executives from General Motors Corp., Ford Motor Co. and Chrysler Group said after meeting with Bush at the White House that he agreed with their plans to significantly increase production of alternative fuel vehicles. The executives have pledged to make half their companies' annual vehicle production by 2012 able to run on fuel made from 85 percent ethanol or biodiesel.

"Fair to say he is not necessarily advocating regulatory approaches, but what kind of market-based approaches can we use," GM Chief Executive Rick Wagoner told reporters after the meeting. "We didn't get a lot more detail than that but that was the tone of the conversation.

"What we tried to make clear to the president that his direction, particularly relying more on biofuels and technology, are things that are within our grasp now," Wagoner said.

Struggling Detroit automakers want tax breaks and other government incentives to help them retool their plants and create conditions for greatly expanding the limited infrastructure for producing and delivering ethanol and other alternative fuels to consumers.

Bush met with the executives as part of his legislative push to reduce gasoline consumption by 20 percent in 10 years. Much of the plan would leverage alternatives to traditional fuel, but an important component would require more stringent federal fuel-efficiency standards. The automakers oppose the Bush's proposal for a 4 percent annual increase in efficiency standards, but said they talked very little about the issue on Monday.

Bush said the pledge by the industry to make half of its vehicles capable of running on alternative fuels in five years would be a technological breakthrough. "If you want to reduce gasoline usage, like I believe we need to do for national security reasons, as well as for environmental concerns, the consumer has got to be in a position to make a rational choice," Bush said.

46. Bush Tours GM Plant, Promotes Alternative Fuels

President George W Bush used the backdrop of visits to struggling US automakers to again pitch his energy agenda, promoting passenger vehicles that use less or no gasoline as a way to reduce oil consumption. Bush toured a General Motors Corp. plant in Kansas and was to visit a Ford Motor Co. facility later in Missouri, symbolic stops that also served to ease strained relations with distressed companies that were once mainstays of the economy.

GM, Ford and Chrysler Group lost a combined US\$16 billion last year and have embraced part of Bush's energy plan to help boost sagging sales. They also want to improve their image with consumers who have turned in greater numbers to more fuel efficient vehicles made by Japan's Toyota Motor Corp. and Honda Motor Co.

Bush ruffled feathers when he said bailouts were out and urged US-based car companies -- now in the midst of historic and wrenching restructurings -- to make "relevant" vehicles to better compete with more nimble competitors. He has promoted new fuel technologies as a way for Detroit to help itself.

On his trip, Bush viewed gasoline/electric hybrid engines and vehicles at the GM facility in Fairfax, Kansas, and was to see similar technology at a Ford plant in Claycomo, Missouri. "What we're talking about today is the president's energy plan and the way in which these two plants are reflecting the kinds of innovation we think are going to be in the best interests of America's economic future and energy future," White House spokesman Tony Snow told reporters traveling with Bush.

The administration believes changes in auto industry practices would be the most dramatic and fastest way to cut petroleum use. Gasoline demand accounts for nearly half of the average daily US consumption of 20.9 million barrels of oil. The administration has proposed legislation to reduce gasoline use by 20 percent over the next 10 years, mainly through the use of hybrids and alternative fuels like ethanol, ethanol/gasoline blends and biodiesel. The proposal would require that autos use 35 billion gallons¹ of alternative fuels by 2017, which is the equivalent of

¹ After intense internal debate it was decided that this would be calculated on a BTU basis but not on a carbon basis.

15 percent of projected gas use in that year. The mandate is a nearly five-fold increase over the amount of alternative fuels required in 2005 energy legislation.

Many energy experts, however, doubt the United States will be able to make the scientific breakthrough necessary to meet the fuels goal. Even the Energy Department's forecasting arm, the Energy Information Administration, predicts US ethanol production will reach just 11.5 billion gallons a year by 2017, way short of what Bush wants.

Bush also wants cars to go further on a gallon of gasoline although the auto industry opposes his plan for increasing minimum federal mileage standards by 4 percent annually to 34 miles per gallon by 2017. However, Ford, GM and Chrysler have agreed to double, to 2 million, the number of cars and trucks capable of running on renewable fuels by 2010.

47. Automakers Fight Calls to Boost US Fuel Efficiency

A sharp increase in auto fuel efficiency standards will not result in a meaningful drop in US oil consumption and would add billions in costs, according to chief executives of the world's top car companies. The officials from Chrysler Group, General Motors Corp., Ford Motor Co. and Japan's Toyota Motor Corp. agreed that significant efficiency improvements and reduced carbon emissions will come mainly from alternative fuels, hybrids and other technology -- not tougher fuel mandates.

"We need government to be our partners, not our adversaries," Ford chief executive Alan Mulally told an Energy and Commerce subcommittee hearing in the House of Representatives.

The automakers' position is squarely at odds with a proposal from President Bush and a growing number of lawmakers who favor an increase in fuel economy of 4 percent annually to quickly and dramatically cut oil use.

"It's not going to fix the problems that are relevant," GM chief executive Rick Wagoner said after the hearing about whether the proposals were workable. Wagoner said a 4 percent increase -- to roughly 34 miles per gallon for all vehicles -- over the next decade could cost his company more than US\$40 billion. Other executives did not challenge the estimate of billions more in cost, and did not give a figure during the hearing or when pressed by reporters.

Wagoner and his counterparts back a modest increase in fuel standards if the government changes the way they are calculated and only if engineering experts at the Transportation Department, not Congress, decide what is feasible. "We urge Congress to resist the temptation to set some arbitrary level," Wagoner said.

The auto executives say the 30-year-old government fuel efficiency program has not quelled the appetite for imported oil. Even sharp increases in efficiency would not reduce consumption with more cars on the road, they said.

"If all the new vehicles sold in the US 10 years from now were hybrids or diesels -- something that no one really believes is feasible -- fuel economy would improve by only 25 to 30 percent," said Chrysler's Tom LaSorda.

Auto companies have long resisted raising the standard, which has been updated incrementally in the past two decades. An automaker's fleet of new passenger cars must average 27.5 miles

per gallon, a figure that has not changed in 17 years. Sport utility vehicles, pickups and other light trucks must get 24.1 mpg by 2011, under changes imposed by regulators last year.

At the hearing, the auto chiefs agreed that a cap in tail pipe emissions might be feasible, but only if fuel and other industries rein in their emissions and carbon production, too.

A new fuel efficiency standard of 34 mpg would cut roughly 230 million metric tons of air pollution -- the equivalent of taking 30 million cars off the road, said David Friedman, research director at Union of Concerned Scientists.

48. Canada to End Oil Sands Aid, Add Green-Car Rebates

Canada's minority Conservative government, pressured to do more on the environment, will phase out some oil sands tax incentives, introduce rebates for hybrid vehicles, tax gas guzzlers and subsidize renewable fuels.

The provision allowing accelerated write-off of oil sands investments will be phased out gradually so projects that had counted on them can proceed. Existing developments will get the allowance; for new projects the provision will be phased out between 2011 and 2015.

Alberta's oil sands, which rival Saudi Arabia's conventional oil reserves in size, are the target of an unprecedented development rush as companies look to cash in on North America's thirst for secure energy supplies. Such projects are also a major source of greenhouse gas emissions, however.

The government will extend by eight years, to 2020, an accelerated write-off of investment in equipment that generates energy more efficiently or uses renewable energy sources. It will be expanded to include wave and tidal energy and additional solar and waste-to-energy technologies.

The Conservatives, elected in January 2006, have changed tack and made the environment a top priority in response to a sudden surge in concern on the part of Canadians.

They have announced a rebate of C\$1,000-C\$2,000 (US\$850-\$1,700) for purchases of new fuel-efficient vehicles. Examples of those eligible for the full rebate include the Toyota Prius, the Honda Civic Hybrid and a hybrid model of the Ford Escape SUV. Most major car makers have at least one on the list, including the Saturn Vue Hybrid, the Jeep Patriot and flexible-fuel versions of the Chevrolet Impala and Chrysler Sebring.

The government is also slapping on a new "Green Levy", or gas-guzzler tax, of C\$1,000-C\$4,000 on the sale of new passenger vehicles that are not fuel-efficient.

The budget allocated C\$2 billion for renewable fuels. This includes C\$1.5 billion as incentives for ethanol and biodiesel; and C\$500 million to help build plants for next-generation renewable fuels, produced from agricultural and wood waste products like straw and wood residue.

49. GM Targets 2010 Production for Electric Car

General Motors Corp has set a target for production of an all-electric car in 2010, GM's product chief and Vice Chairman Bob Lutz told reporters on the sidelines of the Geneva auto show. Lutz

said the major uncertainty facing the Chevrolet Volt, a concept vehicle GM unveiled in January, was whether lithium-ion batteries can be developed to power it economically and safely. A running Volt prototype is expected by the end of 2007, he said.

"We have set an internal target of production in 2010. Whether we can make that or not, this is still kind of an unpredictable program for us." He added: "We're sort of outside our comfort zone."

GM detailed its broad plans for the all-electric Volt at the Detroit auto show, but the world's No. 1 automaker declined then to disclose a production timeline.

GM has said it is aiming for the Volt to be able to run for 40 miles on pure electric power, meaning many commuters would be able to get through a day without using gasoline.

Lutz said GM's initial work had shown that the production version of the Volt would have to shed some of the bold styling cues of the concept, including the extreme front placement of the wheels.

Lutz also said there was still a chance that the concept could prove unworkable. "I would say there is still a 10 percent chance this will fail," he said.

ASIA-PACIFIC

50. China Plans More Regular Bans for Big Polluters

The State Environmental Protection Administration, or SEPA, plans to ban enterprises and projects that harm the environment on a more regular basis, the China News Service quotes Vice Minister Pan Yue as saying.

SEPA currently uses bans as a one-off punishment to force enterprises that violate the environmental law to close or stop production. But Pan Yue says the environment watchdog plans to use bans as an effective measure to encourage enterprises to upgrade their equipment and introduce environmentally-friendly practices.

Pan commented on the use of bans at a press conference. He also announced the bans SEPA imposed on four cities and four power companies for their appalling environmental tracks records have been completely lifted. The four cities are Tangshan in Hebei Province, Lvliang in Shanxi, Liupanshui in Guizhou and Laiwu in Shandong. The power companies are Datang, Huadian Power, Huaneng Power and State Power.

Pan announced the bans have been lifted because all the companies and cities now comply with national standards, thanks to local government's support on environmental protection.

He said SEPA initiated the ban to curb severe regional pollution. Bans can be used effectively to change industrial practices across entire regions and encourage economic development to proceed in line with environmental protection.

Staffs from environmental departments at all levels have inspected 82 highly-polluting enterprises and projects in more than 20 provinces since January 10, when SEPA imposed the ban on highly-polluting companies and cities for the first time.

Pan said the series of bans have helped to change the mindset of local government administrations that stress development at all costs and ignore the environment. He said these governments must stop depending on highly-polluting industries to generate the bulk of their revenue. They should now focus on developing clean, modern industries.

51. Beijing Continues Endeavor For Better Air Quality

The Beijing Municipality will take new measures to raise the number of days of good air quality to 67 percent and cut down the emission of sulfur dioxide by 10 percent in 2007, according to information from the Beijing Environmental Protection Bureau.

To bring the coal-burning pollutants under control, the city will use new energy sources to replace coal for the 1,105 remaining boilers less than 20 tons in the downtown area. For the 20,000 families living in one-story houses in the Dongcheng and Xicheng districts, coal will be replaced by electricity. Coal, now used by the residents living within the Fifth-Ring Road, an area where urban and rural areas overlap, will also be gradually replaced by other energy sources.

To control vehicle pollutants, authorities are going to enforce the IV national emission standard (Euro 4) for new vehicles in 2008. In addition, a total of 2,580 old buses and 5,000 taxis and other highly polluting vehicles will be taken off the roads.

New measures will be taken to control industrial pollution. The city's five coal-burning power plants will complete their dust removal, desulfurization and denitrification plans. The Capital Steel Plant will have to cut down production by 4 million tons, while the No II Chemical Plant and the Organic Chemical Plant will stop production altogether.

Since 1988 Beijing has gone through 12 phases of air quality control. During the 13th phase in 2007, the city will also strive to control dust pollution, protect its ecological environment and promote the "Green Olympics" concepts.

52. New Chinese Gasoline Standard Released

The new standard of "Gasoline for motor vehicles" (GB 17930-2006) was promulgated by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China and Standardization Administration of the People's Republic of China on December 6 2006. The key part of the standard in English is available now.

Technical specifications and test methods of vehicular gasoline (II) (Euro 2)

Item	Quality Index			Test Method
	90#	93#	97#	
Anti-Knock Property				
RON \geq	90	93	97	GB / T5487
Anti-Knock Index (RON + MON) / 2 \geq	85	88	report	GB / T503, GB / T5487
Lead Content ⁽¹⁾ , g/L \leq	0.005			GB / T8020
Distillation	70			

Item	Quality Index			Test Method
	90#	93#	97#	
10% point, °C ≤ 50% point, °C ≤ 90% point, °C ≤ Final boiling point, °C ≤ Residue, % (v/v) ≤		120 190 205 2		GB / T6536
Vapor pressure, kPa Nov.1 –Apr.30 ≤ May.1-Oct. 31 ≤		88 74		GB / T8017
Existent Gum, mg/100mL ≤		5		GB / T8019
Induction Time, min ≥		480		GB / T8018
Sulfur Content ⁽²⁾ , % (m/m) ≤		0.05		GB / T380 GB/T11140 GB/T17040 SH/T 0253 SH/T 0689 SH/T 0742
Mercaptan: Mercaptan Sulfur (doctor test) Mercaptan Sulfur Content(%) (m/m) ≤		Compliance 0.001		GB / T0174 GB / T1792
Copper erosion (50°C, 3h) , level ≤		1		GB / T5096
Water-soluble acid or alkali		None		GB / T259
Mechanical impurities and water		None		Eyeballing ⁽³⁾
Benzene content ⁽⁴⁾ , % (v/v) ≤		2.5		SH/T 0713 SH/T 0693
Aromatics content ⁽⁵⁾ , % (v/v) ≤		40		GB / T11132 SH/T 0741
Olefin content ⁽⁵⁾ , % (v/v) ≤		35		GB / T11132 SH/T 0741
Oxygen content, % (m/m) ≤		2.7		SH/T 0663
Methanol content ⁽¹⁾ , % (m/m) ≤		0.3		SH/T 0663
Manganese content ⁽⁶⁾ , g/L ≤		0.018		SH/T 0711
Iron content ⁽¹⁾ , g/L ≤		0.01		SH/T 0712

Item	Quality Index			Test Method
	90#	93#	97#	
<p>⁽¹⁾ Methanol and other additives containing lead or iron are forbidden to be added into gasoline for vehicles on purpose.</p> <p>⁽²⁾ In arbitral experiment the result from GB/T 380 shall be took as authority.</p> <p>⁽³⁾ Observing the sample poured into the glass measuring cylinder, it should be transparent, without suspended and deposited mechanical impurities and determination. In case of dispute GB/T511 and GB/T 260 shall be used.</p> <p>⁽⁴⁾ In the arbitral experiment the result from SH/T 0713 shall be took as authority.</p> <p>⁽⁵⁾ For 97# gasoline, given the total controlled content of olefins and aromatics remains the same, the maximum of aromatics content can be 42% (v/v). In the arbitral experiment the result from GB/T 11132 shall be took as authority.</p> <p>⁽⁶⁾ The manganese here means that exists in MMT. Other additives containing manganese are forbidden to be added.</p>				

Table 2 Technical specifications and test methods of vehicular gasoline (III)² (Euro 3)

Item	Quality Index			Test Method
	90#	93#	97#	
Anti-Knock Property				
RON \geq	90	93	97	GB / T5487
Anti-Knock Index (RON + MON) / 2 \geq	85	88	report	GB / T503, GB / T5487
Lead Content ⁽¹⁾ , g/L \leq	0.005			GB / T8020
Distillation				
10% point, °C \leq	70			GB / T6536
50% point, °C \leq	120			
90% point, °C \leq	190			
Final boiling point, °C \leq	205			
Residue, % (v/v) \leq	2			
Vapor pressure, kPa				
Nov.1 –Apr.30 \leq	88			GB / T8017
May.1-Oct. 31 \leq	72			
Existent Gum, mg/100mL \leq	5			GB / T8019
Induction Time, min \geq	480			GB / T8018
Sulfur Content ⁽²⁾ , % (m/m) \leq	0.015			GB / T380 GB/T11140 SH/T 0253 SH/T 0689 SH/T 0742
Mercaptan: Mercaptan Sulfur (doctor test) Mercaptan Sulfur Content(%) (m/m)	Compliance 0.001			GB / T0174 GB / T1792

² The transition period will not terminate until Dec.31 2009.

Item	Quality Index			Test Method
	90#	93#	97#	
	≤			
Copper erosion (50°C, 3h) , level	≤	1		GB / T5096
Water-soluble acid or alkali		None		GB / T259
Mechanical impurities and water		None		Eyeballing ⁽³⁾
Benzene content ⁽⁴⁾ , % (v/v)	≤	1.0		SH/T 0713 SH/T 0693
Aromatics content ⁽⁵⁾ , % (v/v)	≤	40		GB / T11132 SH/T 0741
Olefin content ⁽⁵⁾ , % (v/v)	≤	30		GB / T11132 SH/T 0741
Oxygen content, % (m/m)	≤	2.7		SH/T 0663
Methanol content ⁽¹⁾ , % (m/m)	≤	0.3		SH/T 0663
Manganese content ⁽⁶⁾ , g/L	≤	0.016		SH/T 0711
Iron content ⁽¹⁾ , g/L	≤	0.01		SH/T 0712
<p>⁽¹⁾ Methanol and other additives containing lead or iron are forbidden to be added into gasoline for vehicles on purpose.</p> <p>⁽²⁾ In arbitral experiment the result from SH/T 0689 shall be took as authority.</p> <p>⁽³⁾ Observing the sample poured into the glass measuring cylinder, it should be transparent, without suspended and deposited mechanical impurities and determination. In case of dispute GB/T511 and GB/T 260 shall be used.</p> <p>⁽⁴⁾ In the arbitral experiment the result from SH/T 0713 shall be took as authority.</p> <p>⁽⁵⁾ For 97# gasoline, given the total controlled content of olefins and aromatics remains the same, the maximum of aromatics content can be 42% (v/v). In the arbitral experiment the result from GB/T 11132 shall be took as authority.</p> <p>⁽⁶⁾ The manganese here means that exists in MMT. Other additives containing manganese are forbidden to be added.</p>				

53. Over 1 Million Automobiles To Be Banned During Olympic Games

More than one million automobiles will be banned from driving in Beijing during the Olympic Games in 2008 to reduce traffic congestion and improve air quality. Liu Xiaoming, vice director of the Beijing Municipal Transportation Committee, said that the ban is expected to reduce the number of vehicles in Beijing by 20 percent to 30 percent during the games.

The vehicles belonging to government departments and state-owned enterprises will have restricted access to Beijing's downtown and citizens will be encouraged to reduce the use of private cars, Liu said. Heavily polluting trucks will be banned.

During the games free bus service will be available for athletes, spectators and games' volunteers and workers, said Liu.

Statistics show that the number of newly registered automobiles in Beijing is growing by 1,060 a day. There are currently 2.97 million automobiles in the city and that number is expected to exceed 3.3 million by the time the Olympic Games begin in August 2008.

When China-Africa Forum convened in Beijing in November last year, Beijing authorities also restricted the use of vehicles belonging to government departments and state-owned enterprises, and shortened school hours to ease traffic congestion. Half of the business vehicles from central government departments and army vehicles in Beijing, and 80 percent of the cars from the Beijing municipal government departments and the provincial bureaus located in the capital, were banned from the roads during the forum.

54. More Environmental-Friendly Buses to Cut Pollution in Beijing

Beijing transport authorities are to phase out 2,500 buses which fail to meet emissions standards and buy 2,810 environment-friendly vehicles this year.

Eighty percent, of 2,350, of the public transport vehicles to be purchased by the city this year will be buses with diesel engines that have achieved the European IV standard for emissions, and 160 will be trolleybuses.

The city would buy another 300 buses which run on compressed natural gas, bringing their total number to 4,000, said Feng Xingfu, deputy general manager of Beijing Public Transport Holdings Ltd.

"Compared with the European III standard, European IV has cut particle emissions by a further 80 percent. European IV buses will have more engine power and improved fuel efficiency." said Feng.

"Beijing is in fact keeping in pace with European countries," he added.

Vehicle emissions are a major source of pollution in the Chinese capital. The municipal government has announced it will renew public transport vehicles that fail environment standards before the 2008 Olympic Games.

The public transport company has upgraded 11,000 buses since 2004, or 60 percent of the total. The number of renewed buses is expected to reach 20,000.

The design of the new vehicles will be more passenger-oriented. For example, the buses will be lower and more accessible to the elderly, and handrails will be more convenient for passengers, Feng said.

55. IOC Confident of Environment and Traffic by 2008 Games

International Olympic Committee (IOC) inspectors cast a vote of confidence in Beijing's capability of tackling challenges like air pollution and traffic congestion during the 2008 Olympic Games. Hein Verbruggen, chairman of the IOC's Coordination Commission for the Beijing Games, gave a positive review of Beijing's work following a three-day inspection visit.

"Without exception, in every area considerable progress has been made...we are confident to say that they are at the level of preparation that we would expect BOCOG to be," Verbruggen told a press conference.

Although praise was heaped on the Beijing organizers' overall competence, especially for the quality of the venues, concerns about poor air quality and traffic jams still remain.

Verbruggen acknowledged Beijing's efforts to improve the environment but said that rapid economic development added to the problems. "As far as we can see, everything that has been promised (by Beijing on fighting pollution) has been delivered," said Verbruggen.

"Obviously, given the economic development of this country, there are problems that have been added to that, and that leads to requests for contingency plans, if necessary, if needed for test events this year as well as August 2008," he added.

Beijing will stage 26 test events this year and Verbruggen indicated that they would be a decisive factor in the smooth operation of the 2008 Games.

"We have asked that the contingency plans, the effects of those plans, will be calculated so that we know that it is enough to guarantee that the quality of the air will allow the athletics performances that we expect to happen here next year," he said.

During its eighth visit to the Chinese capital, the coordination commission looked at a number of functional areas, including the environment, human resources, medical and technology, and toured some Olympic venues including the National Stadium, dubbed the "Bird's Nest" and the neighboring "Water Cube" National Aquatics Center.

With 477 days left to go before the Beijing Games open on Aug. 8, 2008, Verbruggen said that much work remains to be done, but added that it is "normal".

56. Alternative Vehicles Showcased In China

One experimental clean-energy car runs on natural gas. Another uses ethanol distilled from corn. A third has a zero-emissions electric motor powered by a hydrogen fuel cell. These alternative vehicles were created not by a global automaker but by China's small but ambitious car companies, which displayed them Sunday alongside gasoline-powered sedans and sport utility vehicles at the start of the Shanghai Auto Show.

At a time when they are still trying to establish themselves in international markets, Chinese automakers are already investing in such avant-garde research in a bid to win a foothold in the next generation of technology. "This is the tide of the industry. If you don't go with the tide, the industry will pass you by," said Qin Lihong, a vice president of China's biggest domestic automaker, Chery Auto Co., in an interview ahead of the show's opening.

China's leaders are encouraging the development as part of efforts to cut pollution and rising dependence on imported oil and to make this country a creator of profitable technologies.

Chinese manufacturers are getting help from foreign automakers in joint ventures and from research alliances with Chinese universities and government laboratories.

Beijing has made cleaner cars a policy priority, targeting the field as one of 11 priority areas in a 15-year technology development plan issued in February 2006. It promised grants and tax breaks to support industry efforts.

The campaign embodies one of Beijing's strategies in technology development: Pick new areas with no entrenched competitors so China can make breakthroughs without huge costs. While foreign automakers have a lead in conventional technology, "in new energy we're starting from almost the same line," said Chen Hong, the president of Shanghai Automotive Industries Corp. "So we believe we can catch up with other auto companies and make great progress in developing new energy vehicles," Chen said.

57. Hong Kong Advocacy Group Initiates Lawsuit Over Pollution

A Hong Kong advocacy group has initiated legal action against the regional government over what it says is a systemic failure to protect citizens' health from the harmful effects of air pollution. In documents filed with the Chinese Special Administrative Region's High Court on March 28th, the newly formed Clean Air Foundation of Hong Kong asked for a judicial review of government policy that has, it says, failed to stem dangerous air pollution.

"The government has not adopted appropriate legislative, administrative, budgetary, judicial, promotional, and other measures that would enable the full realization of the right to health," Gordon Oldham, an attorney and 28 year resident of Hong Kong, said in the petition to the court. "The air we breathe in Hong Kong Special Administrative Region is poisoning us, shortening our lives, and then killing many of us," he added.

In a statement released one day after the filing, the Hong Kong Environmental Protection Department said it remains committed to reducing air pollution and that it will seek legal advice from the region's justice division should the court accept the review request.

Despite government pledges to curb emissions, Hong Kong's air pollution has worsened in recent years due largely to the increase in manufacturing in the neighboring Chinese province of Guangdong. Local vehicle emissions and coal-fired power plants also contribute significantly to Hong Kong's air pollution, according to the World Health Organization and local environmental protection groups.

58. Analysis Of Pearl River Delta Regional Air Quality Monitoring Data Released

Civic Exchange and the Institute for the Environment (IE) of the Hong Kong University of Science and Technology (HKUST) applauded the release of the 2006 monitoring results of the Pearl River Delta (PRD) Regional Air Quality Monitoring Network. The report provides the most comprehensive and publicly available summary of the air quality data for the PRD. With a full year of data, there is now a stronger foundation for understanding the region's air quality.

The Guangdong data just released from the ground stations confirm that the air quality in 2006 throughout the region was a threat to people's health. The most polluted areas are those just to the west and south of the Guangzhou urban area.

Hong Kong is less polluted than most of the region although Zhuhai and Zhongshan experienced less pollution still.

Alexis Lau of HKUST IE points out the scientific value of this information, "In addition to providing year-long summary of previously unreported species like ozone, the new data also provides ground truthing confirming earlier satellite-derived regional air quality distributions. By examining the new data and combining it with satellite data, we can clearly see that, compared with the early 2000s, the severity of the pollution at the urban centers has worsened, and regionally the area affected by highly polluted air is now much larger. By having already examined pollution flow in 2006 in our recent study, we also know the relative importance, by mass and by time, of both local and regional emissions for Hong Kong."

Christine Loh of Civic Exchange notes the policy implications, "It is indisputable Hong Kong must work hard on two fronts at the same time. We must clean-up our own pollution sources (transportation, power and marine), which are the dominant sources locally 53% of the time, and collaborate with the authorities across the border to reduce emissions from a variety of activities in the PRD - including power generation, manufacturing, transportation and port operations".

Bill Barron of HKUST and Civic Exchange noted, "With the improved data base authorities will be able to more readily identify the most important pollution hot spots and over the long term site new polluting facilities in places where the emissions will do the least damage to people's health."

59. Japan's Prime Minister Tells Cabinet To Develop Post-2012 Emissions Plans

On March 20th, Japanese Prime Minister Shinzo Abe instructed his global warming policy panel to begin regular ministerial meetings to develop greenhouse gas emission-reduction measures for the post-2012 period. The meetings would include the minister of economy, trade, and industry; the minister of the environment; the foreign minister; and the minister of land, infrastructure, and transport.

The post-2012 measures are likely to include aggressive measures to cut Japan's greenhouse gas emissions, which currently are about 14.1 percent higher than they were in 1990, according to a Ministry of the Environment official.

The 1997 Kyoto Protocol calls for Japan to reduce its greenhouse gas emissions 6 percent below 1990 levels by the period 2008-2012.

At a meeting on March 20th of the Global Warming Policy Promotion Headquarters, a policy panel made up of the prime minister and all Cabinet members, Abe said Japan "must take a leadership role for drafting a framework for the post-Kyoto arrangement."

Abe also noted that achieving a 6 percent reduction in greenhouse gases by the end of 2012 is "Japan's international commitment, and it is the premise in formulating our future international strategies".

A Foreign Ministry official said German Chancellor Angela Merkel is likely to put further greenhouse gas reductions on the agenda of the Group of Eight leaders' summit in June. Germany this year chairs the G-8, which is made up of Canada, France, Germany, Italy, Japan, Russia, the United Kingdom, and the United States.

The Foreign Ministry official said Abe also wants to focus on global warming, as well as other environmental issues, when Japan chairs the G-8 in 2008.

Merkel is expected to push for a 20 percent reduction in emissions (compared to 1990 levels) by 2020, a plan advanced by the executive European Commission and approved by EU member states two weeks ago.

Japan, for its part, is exploring ways to encourage the United States, China, India, Australia, and other countries to commit to GHG emission reductions after 2012, the Environment Ministry official said.

60. Japan Plans to Boost Production, Use of Biofuels

On February 22nd, the Japanese government adopted a report outlining plans to increase domestic production of bioethanol to 6 million kiloliters, or roughly 10 percent of its annual gasoline consumption, by 2030 as part of its greenhouse gas emission reduction policy, an official of the Ministry of Economy, Trade, and Industry's Agency of Natural Resources and Energy said. The report was unanimously approved at an inter-ministerial Biomass Nippon Strategy Promotion Council meeting. Japan's current bioethanol production is about 300,000 kiloliters a year, compared with Brazil's 16.5 million kiloliters and 15 million kiloliters in the United States, the official said. In boosting output, the report recommended using rice stalks, wood chips, and other under-used resources instead of corn and sugar cane because of Japan's limited production of those, he said. The report also called for legislation to allow the blending of bioethanol in gasoline, now limited to 3 percent, to 10 percent, as well as to differentiate and lower tax rates on bioethanol for use as fuel rather than as liquor.

61. Japanese Report Outlines Costs of Cutting Emissions

Japan will need to invest ¥6.7 trillion to ¥9.8 trillion (\$55 billion to \$81 billion) annually if it is to reduce its carbon dioxide emissions 70 percent from 1990 levels by 2050, the National Institute of Environmental Studies said in a report on February 15th. The Environment Ministry institute projected that 40 percent to 45 percent of the reduction can be achieved by energy-use cutbacks, improvements in efficiency, and "de-carbonization" of energy supplies. The costs would amount to about 1 percent of Japan's gross domestic product, which is comparable to its annual defense outlays, the report said. The report included the following projections: industry can cut emissions 20 percent to 40 percent through restructuring and conservation technologies; transport can cut emissions 80 percent through modal shifts and efficiency improvements; and offices and households can cut emissions 40 percent to 50 percent with design improvements and more efficient equipment and appliances.

62. China to Consider Draft Energy Law This Year

A draft of China's first energy law is likely to be submitted to senior officials later this year, following international consultation on its contents, an official Chinese newspaper has reported. The proposed legislation will be sent to China's State Council and an international meeting will discuss the draft in April, the China Daily reported, citing energy officials. The law "will be the overarching one for the country's energy industry and trade," the paper said, citing He Yongjian from the office of the National Energy Leading Group. It will address energy planning, exploration, conservation, reserves and technological innovation, He told the paper.

China, the world second-biggest energy user after the United States, has seen explosive growth in consumption of oil, coal and power as its economy has boomed. China's consumption of crude oil and refined products rose an estimated 9.3 percent to 346.55 million tons in 2006 from the previous year, the commerce ministry said last month, a far faster rate than most foreign analysts had estimated.

But the country does not have a separate ministry of energy, and He said policy makers have been grappling with how to better coordinate energy regulation. They have been considering "whether to have a unified national energy administration," he said.

He said a team of experts began working on the proposed energy law early last year. The report did not specify when the proposed legislation would take effect.

63. Global Warming Takes Toll on China

The China Meteorological Administration (CMA) said the winter season from December 2006 to February 2007 recorded a national average temperature of -2.4 C, following the warmest winter in the country between 1998 and 1999, with an average temperature of -2.3 C. Song Lianchun, spokesman of CMA, told a press conference that the national average temperature and the regional average temperature in 19 provinces, autonomous regions and municipalities last month were the highest compared to the corresponding periods each year since 1951.

Song said this winter the country has also been hit by heavy fog, sandstorms and drought. In some areas of north and south China, fog lasted for up to 10 days, causing chaos to transportation and worsening air pollution.

By the end of last month, a large part of north, northwest and southwest China had been stricken by severe drought. Six million people in Chongqing could be facing water shortages by the beginning of May due to drought along the Yangtze River, Xinhua reported. Song warned that Sichuan Province and Chongqing, which suffered from drought and scorching-high temperatures last year, could possibly be hit by drought again this year.

He said the northern part of the country has experienced four sandstorms since the start of the year. Wind gusts from a sandstorm derailed a train in the Xinjiang Uygur Autonomous Region, leaving three dead and more than 30 people injured.

Song said another expected cold front could possibly cause more sandstorms in Xinjiang, Gansu and Inner Mongolia.

The good news, however, is that the CMA expects fewer sandstorms this year, compared with 2006. It said there might be 11 to 15 sandstorms in the north in spring, compared to 18 in 2006.

64. China's Premier: Energy Saving, Pollution Control Targets Must Be Met

Chinese Premier Wen Jiabao vowed at the legislature that the government will meet the energy saving and pollution control targets between 2006 and 2010 despite last year's setback. The Chinese government set the goal of reducing energy consumption per unit of gross domestic product by 20 percent and major pollutants discharge by 10 percent in the Eleventh Five-Year Plan.

Wen said in a report on government work at the opening of the full session of the National People's Congress that China's energy consumption per unit of GDP in 2006 went down 1.2 percent, and oxygen chemical demand and sulfur dioxide emissions rose 1.2 percent and 1.8 percent, respectively.

He said the country fell short of the targets set at the beginning of last year for cutting energy consumption per unit of GDP by four percent and discharge of major pollutants by two percent. "The targets can't be revised and we must work resolutely to reach them," Wen said. He noted that the State Council will make annual reports on the progress made in saving energy and reducing major pollutants discharge to the NPC starting this year, and report on the overall progress made over the past five years at the end of the Eleventh Five-Year Plan period (2006-2010).

He blamed slow industrial restructuring and over-heated growth of the heavy industry, especially the highly energy-consuming and polluting sectors, for failure to attain the two goals. "Lots of outdated production facilities are still in operation. Meanwhile, some local governments and companies failed to strictly comply with laws, regulations and standards on energy saving and environmental protection," Wen said.

Official statistics show the growth gap between the light and heavy industries expanded to 4.1 percent for the whole year of 2006 from 1.8 percent in the first half.

NPC deputy Liu Cigui, acting mayor of southeastern coastal city of Xiamen, said that it would be much harder to meet the targets if the irrational industrial restructure were not improved as soon as possible.

Wen pointed out in the report that China will not approve any new projects that fail to pass the government's energy saving and environmental impact assessment, and will close down any businesses that fail to comply with the energy saving and pollution control standards.

He also said the government plans to shut down small coal-fired power plants with total electricity generating capacity of 50 million kilowatts between 2006 and 2010 and shut down outdated production facilities in steel, cement, electrolytic aluminum, ferrous alloy, and coke and calcium carbide industries.

Zhu Hongren, deputy director of the economic operation bureau at the National Development and Reform Commission (NDRC), said China's current extensive economic growth has gone beyond the bearing ability of the environment and resources. "We are left with no other alternatives but to meet the targets," said Zhu.

Wen said the government would apply a full range of economic levers such as pricing, government finance, taxation and credit to promote energy saving and environmental protection. The government will deepen the reform of the pricing system for major resource products and charges for pollution emissions, improve the system of taxes on resources and strengthen the compensation system for mineral resources exploitation. "It will take time for the relevant policies and measures to produce the desired results," he said.

China will earnestly fulfill its commitment to the international community to curb global warming as the country is seeking sustainable development, said Chinese Foreign Minister Li Zhaoxing. "China, as one of the developing countries suffering from climate change, pays great attention

to this issue," said Li at a press conference held on the sidelines of the annual session of the National People's Congress (NPC), China's top legislature.

China has set a target to put the emissions of greenhouse gas under control and reduce energy consumption for per unit GDP by 20 percent during the 2006-2010 period. "This will be China's contribution to resolving the issue of global climate change," said Li.

65. China to Promote "Green" Autos

The Chinese government will frame regulations on the production of autos fuelled by alternative energies to encourage research and produce of environmentally-friendly "green" vehicles. The National Development and Reform Commission (NDRC) published on its website a draft regulation on managing the production of alternative energy vehicles and called for suggestions and comments.

The term alternative energy vehicles refers to hybrid-electric vehicles, battery electric vehicles (including vehicles on solar energy), fuel cell electric vehicles, etc.

The draft regulation defines three levels of alternative energy auto technologies. Prototypes will only be allowed to operate in approved areas, and more sophisticated products will be allowed to be produced in batches for sale in approved areas. Only the most sophisticated products will enjoy the same production, sale, and use status as regular autos, the draft states. Firms need to obtain permission from the NDRC before beginning production, and the NDRC will have its say in determining the level of sophistication of the alternative energy technologies used, according to the draft.

Conventional auto fuels commonly used in China are gasoline, diesel oil, natural gas, liquefied petroleum gas (LPG), ethanol gas, and dimethyl ether (DME).

66. China's Environmental Law Set for Update

Though it is not on the NPC Standing Committee's review list this year, legislators will continue to revise the Environmental Protection Law, the cornerstone of China's legal effort to protect the environment, a key environment official said. In its current form, the law's biggest shortcoming is that it lacks a provision clarifying the responsibilities of government, businesses and the public in protecting the environment, said Qian Yi, deputy chairman of the Environmental and Resources Protection Committee of the National People's Congress. Pan Yue, vice-minister of the State Environmental Protection Administration, also said recently that any revision to the Environment Protection Law should focus on holding local government responsible for the quality of the environment.

The law was adopted in 1989, at a time when the country did not have a clear concept of scientific development, said Qian. As a result, the law does not mention any of the current hot topics, like reducing energy consumption, focusing instead on prohibiting the degradation of the environment. Qian said the nearly 20-year-old law could not meet the contemporary demands of social and economic development anymore. Also, with the adoption of laws on clean water, air pollution, clean environmental energy and environment-impact assessments in recent years, the basic role of the Environmental Protection Law will eventually diminish if it is not reviewed to keep pace with progress, Qian said.

67. COFCO Hopeful for Breakthrough in Cellulose Ethanol

China's state-owned grain trader, COFCO, is hopeful it will achieve a breakthrough by 2008 in the production of cellulose-based ethanol, the next generation biofuel derived from agricultural waste. Frank Ning, chairman of COFCO, told reporters the company expected to find a way to reduce production costs for the ethanol by 2008 as it worked together with Danish enzyme supplier Novozymes A/S on the second-generation biofuel.

Ning was speaking to a small group of reporters after the market debut of China Agri-Industries Holdings Ltd., a spin-off of food processor COFCO International Ltd. in charge of biofuel and soy oil. China Agri is investing 50 million Yuan (US\$6.5 million) to build a pilot plant to convert cellulose-based biomass into fuel ethanol. The plant in Zhaodong in the northeastern province of Heilongjiang will have an annual capacity of 5,000 tons.

With a boom in ethanol made from corn or sugar threatening food security in countries such as China and even the United States, many firms, including Dupont Co., are racing to develop a commercially viable technology for cellulosic ethanol.

Ning said he would seek government support for the project.

China, the world's number-two oil importer, is expected to release a five-year plan for the biofuels sector in the near future, aimed at raising the country's fuel ethanol output to 5 million tons by 2010 and 10 million by 2020.

Though Beijing has stopped approving new fuel ethanol projects since December, it is building a 200,000-tonne-per-year plant in Guangxi, a 300,000-tonne-per-year plant in Hebei, a 300,000-tonne-per-year plant in Liaoning and a 100,000-tonne-per-year plant in Hubei.

BOC International, which lead-managed China Agri's initial public offering, said Beijing would hand out unchanged subsidies of 1,373 Yuan per ton of fuel ethanol in 2007 and 2008 to four designated plants, including three in which COFCO owns a share. The four plants are were entitled to a waiver of the 5 percent consumption tax on alcohol and the full refund of value added tax (VAT), it said.

68. China's Long-Awaited Fuel Tax Reform Is Expected To Start In 2008.

Beijing Morning Post reports an official from the State Administration of Taxation said the series of administrative fees that have been levied on the transport industry for years will be annulled after the new fuel tax is launched. The road maintenance fee that has been levied across the country is on the list of fees that will be annulled. But tolls will continue to be levied on highways that were built with loans.

The Ministry of Finance issued the budget report for 2007 which said the fuel tax reform scheme will be drafted in 2007 and the taxes will be launched at the appropriate time. The announcement came after the State Administration of Taxation issued an outline of the national tax work for 2007 in January. The outline also emphasized the reforms.

A tax research official from the taxation administration, Jin Dongsheng, said the launch of the new fuel tax will rely on the oil price, the status of the central budget, related adjustment of tax

management and society's ability to shoulder a price hike.

Oil prices are expected to increase after the new fuel tax is launched. But people do not need to worry about rising fuel costs, according to a researcher with the Development Research Center of State Council called Chen Qingtai. He said the tax rate won't be set as high as it is in foreign countries when it is first introduced. It will gradually rise after that point. A taxation official said fuel price increases will be limited to less than one Yuan (US\$12.5cents).

The National Development and Reform Commission, China's development planner, has been delaying the launch of the new tax due to the sky-rocketing price of oil on the global market. Insiders reportedly say the fuel tax is expected to be launched when international oil prices level off to between US\$50 and US\$55 per barrel.

China started considering the new fuel tax in 1994 as part of its fee-to-tax campaign. In 1997, it enacted the Highway Law, which says road maintenance fees will be replaced by the fuel tax. China was close to launching the fuel tax in 2001 but the move was suspended after authorities said the reforms needed to be revised and improved.

69. Hangzhou to Adopt China III Standards for New Vehicles

East China's Hangzhou City will implement the China II emission standard for all motor vehicles in use in the city starting from July 1, 2007, and new vehicles are requested to meet the China III standard. Hangzhou, the capital city of Zhejiang Province, has witnessed a rapid growth in the number of automobiles in recent years. The total number of motor vehicles in the city had reached 1.18 million by October of last year. On average, one out of four households owns a car. The total number of family cars in the city proper hit 327,000 in October 2006, whereas the figure in 2002 was only 110,000.

70. Hong Kong Takes Some of the Blame for Pollution

Hong Kong's air pollution is caused more often by local power stations and vehicles than by factories in southern China, a new study shows, overturning a commonly held belief. By volume, most air pollution in crowded Hong Kong may come from China, but vehicles, ships and power plants in the former British colony are the main source of pollution for most of the time, the Hong Kong University of Science and Technology and the Civic Exchange think tank says.

Hong Kong's worsening air pollution has become a growing source of concern in recent years. Both local coal-fired power plants and thousands of Hong Kong-owned factories in the Pearl River Delta have been blamed. A government sponsored joint study in 1999 showed that the southern province of Guangdong accounted for 80 percent of the region's emissions.

"More than 50 percent of the time, emissions from local sources dominate the air pollution in Hong Kong," said Alexis Lau at the university.

The government said air quality was at the top of its agenda. "We have imposed emission caps on power companies since 2005 and will progressively tighten the caps," it said.

71. Study Says Bad Air Quality Speeds HK Elderly to Hospital

Hong Kong's air pollution is causing higher hospitalization of elderly patients with chronic bronchitis, an academic study has found, and experts called for urgent improvements in the city's air quality. The study by the Chinese University in Hong Kong is the latest to link the city's worsening air quality to public health.

Frequent bad-haze days now cloak views of Hong Kong's harbor. The study found a correlation between air pollution and hospital admissions for people over 70 years old suffering from chronic obstructive pulmonary disease (COPD) otherwise known as chronic bronchitis. For every 10 micrograms per cubic meter increase in polluting microscopic particulates known as PM 2.5, there was a 3.1 percent rise in the hospitalization rate for elderly patients.

Significant associations were also found between hospital admissions and other air pollutants like nitrogen dioxides, sulfur dioxide and especially ozone.

"With better air quality, perhaps we can decrease the morbidity of the elderly population, or at least the morbidity of COPD patients," said Fanny Ko, a specialist in respiratory medicine at the Chinese University, who called for urgent government action to clean up the city's choked skies.

While chronic bronchitis is caused mainly by smoking, its symptoms, including shortness of breath, can be exacerbated by poor air quality. COPD was Hong Kong's No. 5 cause of death in 2004, afflicting some 9 percent of the elderly population who averaged 23,845 hospital visits per year for the period 2000-04.

Hong Kong's coal-fired power stations are blamed as the city's worst polluters, but increasing emissions also blow across the border from factories in southern China.

72. Two-Stroke Rickshaws Banned On More Roads in Lahore

The City District Government in Lahore has decided to ban two-stroke auto rickshaws on two more roads - Jail Road and Gulberg's Main Boulevard - as a part of the second phase of its plan to eliminate the three-wheelers notorious for creating noise and air pollution by December 2007. Owners and drivers of these rickshaws are likely to be issued a one-month notice through an advertisement in the national press informing them of the ban which will come into effect around mid-April.

Plying of these vehicles has already been banned on The Mall. The restriction on Jail Road was to take effect from September 1, 2006, and on Canal Bank Road from Nov 17, 2006. The step was delayed as under the plan submitted with the Lahore High Court, 2,000 CNG-run four-stroke rickshaws were required on the city roads before going for the ban so that commuters did not suffer because of shortage of the comparatively cheap cab.

CDGL officials had been holding the transport department responsible for the situation as the latter had been delaying issuance of NoC for new four-stroke CNG-rickshaw manufacturing. The companies assigned the task were failing on their promises of providing a specific number of units each month. And the units being marketed so far lack quality, they say.

The officials claim that as now 2,049 CNG rickshaws have come on roads they are initiating the second phase of restrictions.

Nine companies had been approved by the transport department as eligible to qualify for inclusion in the Chief Minister's Green Punjab Program. Under the scheme, people may get the CNG rickshaws against a down payment of Rs27,000 and pay the rest of the amount in installments.

SOUTH AMERICA

73. Brazil Considers Mandatory Biofuel Requirement

Brazil is considering making a 5 percent mixture of biofuel to diesel oil mandatory in 2010, as opposed to 2013 as earlier planned, according to a spokesman for the Ministry of Science and Technology. The government in 2005 passed a law that requires a 2 percent mixture of biofuel to diesel oil (B-2 biodiesel) by 2008. It is thinking of imposing the requirement for B-5 biodiesel by 2010 because of the quicker-than-expected construction of biodiesel plants. Eleven biodiesel plants are now producing 640 million liters per year with another 13 plants under construction that would boost output to 1.3 billion liters by early 2008. Both B-2 and B-5 biodiesel blends consist of adding biofuel made from vegetable oil and sugarcane ethanol to standard diesel.

74. Brazil-U.S. Renewable Fuels Agreement Aims to Build Global Market for Ethanol

On March 9th, U.S. President George W. Bush and Brazilian President Luiz Inácio Lula da Silva announced that the two countries had agreed to cooperate to speed the development of ethanol and other alternative fuels around the world. Bush and Lula announced the agreement during a visit to a Petrobras ethanol refinery in São Paulo. Bush was on a six-day trip to Latin America before returning to Washington on March 14th.

The "memorandum of understanding" was very general, however, and did not contain target dates or investment figures. Its purpose is to provide "a general framework" and to boost cooperation between the two countries in bilateral and multilateral forums. The MOU calls for the formation of a U.S. steering group to oversee work under the direction of the State Department and for a similar group in Brazil.

The initiative will also be assisted by a new International Biofuels Forum, established on March 2nd by the United Nations at the request of Brazil's president.

Bush set the stage for the agreement during his State of the Union address in January, when he proposed that the United States reduce gasoline consumption by 20 percent by 2017 largely by replacing it with ethanol and other alternative fuels. Meeting this target would require a projected 35 billion gallons of renewable fuels, which would entail a sevenfold increase from current production and import levels over the next decade.

The United States and Brazil produce 72 percent of the world's ethanol, in more or less equal amounts. But the United States, which must import part of the ethanol it consumes, makes the majority of its ethanol from corn while Brazil, the world's biggest ethanol exporter, makes it from sugarcane, which is far cheaper and more efficient.

One goal of the U.S.-Brazil biofuels alliance is to create an international quality standard for ethanol as part of a bid to make it a globally traded commodity, according to a spokeswoman for Brazil's Ministry of Development, Industry, and Foreign Trade (MDIT).

Lula said he wants to "lay the basis for a global market for biofuels."

Another goal of the alliance is to provide Central American and Caribbean countries with Brazilian sugarcane-based ethanol technology to encourage production in these countries. Lula, in a March 9 speech, said that "Brazil and the United States must form alliances with other countries to diversify the production of ethanol and other biofuels." Such diversification will grow the global supply of ethanol and, in doing so, increase global demand for the fuel, thus helping consolidate ethanol as an international commodity.

Brazilian ethanol exported directly to the United States is subject to a tariff of 54 cents per gallon. During Bush's one-day visit to Brazil, Lula lobbied him to drop the tariff plus a 2.5 percent ad-valorem duty that the United States imposes on foreign ethanol. Bush, however, said the tariffs, which were set by the U.S. Congress to protect domestic corn farmers, "will, by law, last until 2009. After they expire, Congress will have to decide whether to keep them."

75. Catholic Bishops Slam Brazil Ethanol Growth Plan

Roman Catholic bishops have warned that a rapid increase in cane ethanol production in Brazil could have a devastating social and environmental impact in the countryside.

Brazil is a pioneer in using ethanol as an automotive fuel and is the world's largest exporter of ethanol and second largest producer after the United States.

It is expected to attract at least 17.4 billion reais (\$8.18 billion) in investment over the next four years, increasing production by 40 percent from the current 17 billion liters (4.4 billion gallons). Some analysts say production could double in over five years. The Brazilian National Bishops' Council, or CNBB, said at a news conference that such expansion could exacerbate income inequality in the countryside.

"Cane cultivation leads to land concentration because it requires large plantations and this has traditionally triggered a rural exodus," said Bishop Odilo Scherer, who was recently appointed archbishop of Sao Paulo by Pope Benedict. "I can already see a new exodus (in Brazil)."

The bishops in the world's largest Roman Catholic country also criticized the poor working conditions on sugar cane plantations. "It's a situation of tremendous misery," said Cardinal Geraldo Majella Agnelo, president of the CNBB, citing the long working hours, poor pay and physical strain that cane cutters face.

Government and industry officials say cane cutters in the main growing regions are paid above-average wages for manual labor in the agricultural sector. Mills say they often face difficulties trying to mechanize the harvest because workers protest the potential loss of work.

The industry is responsible for millions of rural jobs and is expected to be one of the fastest-growing economic sectors in coming years.

President Luiz Ignacio Lula da Silva earlier this month likened ethanol producers to national heroes for their planned investments and contributions to economic development.

Majella warned that expanding cane cultivation could encroach on primary forests, increasing deforestation rates. "We are going to turn the country into a huge cane (plantation)," he said.

76. Peruvian Government Report Urges Improving Air Quality in Lima

A Peruvian government report on air quality in the capital city calls for urgent action to improve the situation. The report, Air Quality in Lima and its Impact on the Health and Life of Residents (Ombudsman Report 116), calls for a review of the air quality standards, an overhaul of the transportation sector, and more coordination among state agencies to address air quality.

According to the report, released on March 5th, 86 percent of dangerous contaminants in Lima's air are caused by vehicle emissions. This is driven in part by the fact that more than 65 percent of vehicles used for public transportation in Lima are more than 15 years old, and in some of the city's zones, such as northern quadrant, the average age is 28 years.

Diesel fuel, the most common vehicle fuel in Lima, continues to contain between 4,000 and 6,000 parts per million (ppm) of sulfur. Legislation to lower sulfur levels in diesel to 50 ppm will not take effect until 2009. As evidence of the problem, the report states that the incidence of respiratory illnesses among children in the city increased from 437,000 cases in 1995 to more than 1 million last year.

Manuel Bernales, president of the government's National Environmental Council (CONAM), told the press on March 6th that there is still little interest in controlling the import of old vehicles, inspecting vehicles, and enforcing emissions controls. "The country is not capable of addressing these issues, and I do not believe that they are on the agenda of consumers or regulators," said Bernales.

The report by the ombudsman's office is the latest in a long list of studies and measures concerning air quality in Lima. CONAM, for example, published the Integral Plan for Atmospheric Remediation in Lima and Callao 2005-2010 in October 2006.

77. Argentina Atomic Energy Commission to Develop Hydrogen Fuel

On March 21st, Argentina's National Commission of Atomic Energy (CNEA) announced a project to develop an environmentally friendly fuel for public transportation based on a blend of hydrogen and compressed natural gas (CNG).

Daniel Pasquevich, the CNEA official who will be in charge of the project, said it would be carried out by the agency with help from two state-run universities and with financial assistance from a special federal fund for science and technology and from the energy firm Enarsa, of mixed public and private capital.

He added the fuel, expected to be an 80-20 percent blend of CNG and hydrogen, will require no modifications of engines that are currently capable of handling CNG.

The initial stage of the program involves a 5 million peso (US\$1.6 million) investment over a three-year period. Pasquevich said CNEA expected to have the first buses and trucks running on the new fuel by 2009.

The atomic energy agency is working on a parallel program aimed at reaching mass production of hydrogen from nuclear power to generate "clean energy with minimal greenhouse gas emissions," the official said.

GENERAL

78. Honda Wins Title of Cleanest Auto-Maker

Honda and Toyota lead the world's top eight automakers in lowest greenhouse gas emissions and smog-forming pollution, according to the results of a survey of the auto industry. America's Big Three -- Ford, General Motors and DaimlerChrysler, placed last on the list.

The survey is conducted by the Union of Concerned Scientists, and ranks two factors to determine scores: smog-forming pollution emissions and greenhouse gas emissions. The scores are weighted across models and for the number of each type of car sold.

This is the fourth time in a row Honda has topped the list, but Toyota came within one point of tying for the lead. Hyundai-Kia, Nissan and Volkswagen ranked third, fourth and fifth, respectively, and the American automakers Ford, G.M. and DaimlerChrysler placed sixth, seventh and eighth. The automakers surveyed make up 96 percent of the total U.S. car and light truck market for the model year 2005, the latest for which full data is available.

Honda and Toyota especially had better-than-average scores on GHG emissions across all car classes, and even though Toyota sells a substantial amount of SUVs and pickups, its embrace of emissions-cutting technologies kept it competitive with Honda. Meanwhile, even though Ford began selling its own SUV hybrid, that small advance was more than wiped out by its reliance on -- and the popularity of -- its heavy trucks and SUVs.

Implementing hybrid technologies, or using flex-fuel vehicles that can run on biodiesel and ethanol, is not the only, or even the best, strategy for wide cuts in emissions. Under-the-hood technologies that drivers might not even recognize can also have significant impacts on performance and emissions. Nissan, for example, uses continuously variable transmissions in many of its cars, many automakers are adopting six-speed transmissions, and G.M. and Honda both use cylinder deactivation technologies to improve performance.

The Union of Concerned Scientists expects to see a dramatic shift in results when it releases its next report in roughly two years. Not only will that survey find newer technologies in wider use, but with the advent of the \$3 gallon of gasoline, and concern about global warming on the rise, drivers' tastes are changing.

79. UNEP Says Developing Nations Act To Slow Warming

Developing countries are doing almost as much as rich nations to slow global warming, often as a side-effect of curbs on rising energy use, the head of the U.N. Environment Program (UNEP), Achim Steiner, said. Countries such as China, Brazil or South Africa should get more credit for tougher fuel efficiency for cars or curbs on deforestation, he said. Such measures might be building blocks for a global deal to fight climate change beyond 2012.

"Developing countries have been doing a lot" to slow a rise in emissions of greenhouse gases, he told the press during a conference in Oslo about promoting economic growth while safeguarding the environment.

"Since 1990 developing countries have reduced their emissions pathway in such a way that it is almost equivalent to what (rich nations) committed to under the Kyoto Protocol, in millions of tons," he said of preliminary data.

Kyoto binds most industrialized nations to cut emissions of greenhouse gases, mainly from burning fossil fuels, by 5 percent below 1990 levels by 2008-12. A UNEP official said commitments totaled more than 800 million tons a year.

Developing countries have no goals for limiting emissions under Kyoto and talks on getting them more involved beyond 2012 are stalled. But Steiner said they were slowing rising energy use, often as a reaction to oil prices at around \$68 a barrel. Use of fossil fuels is widely blamed for stoking global warming. "Recognizing what they have done might change the perception in the West that the Chinas and the Brazils and South Africas are not interested and haven't done anything," he said.

"This is part of the key to unlocking the climate negotiations, to shift the focus...to what countries are doing in their domestic agendas that's relevant," he said.

80. DaimlerChrysler to Build Test Fleet of Electric Vans

DaimlerChrysler AG said it would begin testing a fleet of commercial vans capable of running on battery power alone over the course of the next year with the roll-out of its redesigned Dodge Sprinter. DaimlerChrysler said it would produce a "test-fleet" of up to 20 plug-in hybrid versions of its 2007 Dodge Sprinter in order to evaluate the performance of the electric vehicles in real-world driving conditions.

Plug-in hybrids, an alternative to traditional combustion engines and strongly favored by some environmental advocates, can run on battery power alone for short trips and can be recharged with a standard electrical outlet.

DaimlerChrysler said it would combine the rechargeable battery on the Dodge Sprinter with a diesel engine for a bigger gain in fuel economy, saying that would be the first real-world test of that technology.

Proponents see plug-in hybrids as a way to reduce greenhouse gas emissions and the US reliance on imported oil.

DaimlerChrysler's announcement came on the same day that US President George W. Bush was scheduled to visit a Washington-area post office to view commercial vehicles that run on gas alternatives, including models from DaimlerChrysler and rival General Motors Corp.

DaimlerChrysler said some of its new Dodge Sprinters would be equipped with next-generation lithium ion batteries, a power storage technology that promises sharply improved performance over the nickel-metal hydride batteries used in the current crop of hybrids.

DaimlerChrysler's Chrysler Group already has four plug-in hybrid delivery vans on the road with test customers based on the previous version of the Dodge Sprinter. The current version of the Dodge Sprinter plug-in has a battery-powered range of 20 miles, the company said.

"For plug-in hybrid technology to move forward, a dramatic leap in battery technology is necessary," Chrysler Group vice president Mark Chernoby said. "The energy storage systems in the Dodge Sprinter (plug-in hybrid) concept fleet will provide valuable field experience on the possibilities with lithium-ion batteries."

GM is targeting production in 2010 of a plug-in hybrid based on the Chevrolet Volt concept that it introduced at the Detroit auto show in January.

Toyota Motor Corp, which makes the popular Prius and leads the market in hybrid vehicles, has also said it is developing a plug-in vehicle although it has not specified a projected timeline for production.

Auto industry officials say the biggest hurdles to producing mass-market plug-in hybrids remain the cost and safety of the lithium-ion battery packs that they require. Lithium-ion batteries have been used in a range of consumer electronics, including laptop computers, but are only now being adapted for use in vehicles.

81. Cleaner Fuel for Ships May Raise CO2 Emissions Say Shipping Executive

Switching the world's merchant fleet to cleaner-burning distillate fuels could unwittingly raise CO2 emissions, a top ship industry executive told a ship industry gathering in the United States. Chairman of the International Chamber of Shipping (ICS), Spyros Polemis said a move to tighten ship fuel regulations needs to be linked to a proper evaluation of the impact on greenhouse gas emissions. "Otherwise we can finish up with a regulation which solves one problem by creating another," Polemis said in a speech.

The International Maritime Organization (IMO), the world's top shipping body, is examining ways to reduce air emissions from ships. Within that debate some ship industry groups have called on the complete ban of high sulfur marine fuels in favor of running the world's 50,000-strong merchant fleet on cleaner-burning distillate fuels. The ships that carry 90 percent of the world's trade run on high sulfur residual fuels which cause significant pollution, especially close to the shoreline.

But Polemis argued that simply switching to cleaner and more expensive distillates to solve the problem will raise CO2 emissions in the manufacturing process. "IMO should carefully review the environmental necessity of banning the use of higher sulfur fuels in the middle of the ocean, when the results of decisions could be to increase CO2 emission by oil refineries," he said.

"At the moment discussion is focusing on sulfur and particulate emissions...Carbon emissions are being discussed in another part of IMO because they are separate issues," said Simon Bennett ICS secretary, explaining that more CO2 was churned out during the energy-intensive refining process. "But we are saying you need to link the issues because by changing one it may have implications for the other," he said.

When it comes to the debate on global warming the shipping industry has so far largely escaped intense public scrutiny. Like aviation, emissions from shipping are not covered by the international Kyoto protocol on global warming.

"The problem is that there is very little definitive data on carbon emissions produced by the shipping industry," Bennet said. He cited a report by former World Bank chief economist

Nicholas Stern which estimated emissions from shipping at less than two percent in 2000, despite it carrying the vast majority of global trade. "The critical thing to look at is carbon emissions per ton of cargo moved per kilometer. You will find that the industry is two or three times more efficient than road or rail transport and 20 or 30 times more efficient than aviation," Bennet added.

Polemis, in his speech, however, acknowledged the seriousness of the issue, especially as maritime trade was increasing steadily. "Amongst virtually all governments, including the United States, there is now general consensus that something must be done urgently to reduce the world's green house gas emissions," Polemis said. "And in the maritime sphere there is certainly a willingness to make a significant contribution to this goal."

82. CO2 Squares Up With Performance at Geneva Car Show

The issue of reducing carbon dioxide (CO2) emissions from cars has lodged in the brains of car industry executives, but the evidence under the bonnet at the Geneva car show is less conclusive.

"Everyone wants to be perceived as working on reducing CO2 emissions," Sabine Bluemel, automotive analyst at Banca IMI in London, said. "But at the same time they are marketing their cars based on engine performance, and you just cannot have low CO2 emissions and powerful performance at the same time," she said.

At the Geneva show, a plethora of existing or planned vehicles contain technologies to curb CO2 emissions, which are contributing to global warming. There are cars running on natural gas, electricity, biofuels, batteries and solar power.

Several carmakers, such as Toyota of Japan, are investing in hybrid cars that combine internal combustion engines with batteries that power low-speed driving. "Global issues, such as CO2 reduction and energy conservation, require more than just improved technology," Toyota President Katsuaki Watanabe said, calling for improved fuels and the infrastructure to deliver them to consumers.

Germany's BMW presented its Hydrogen 7 car, a luxury 7 Series with a V12 engine that runs on petrol and on hydrogen. Its engine, limited at 230 km per hour, can run 200 km on pure hydrogen plus 500 km on petrol, so drivers aren't stranded between rare hydrogen filling stations.

Luca De Meo, head of Fiat Auto, told the press that its specialty in small cars would work in its favor. "Fiat is in a good position," he said. "It will be a competitive advantage."

Thomas Weber, head of research at DaimlerChrysler, acknowledged the challenge for big cars but said all classes of cars should have to make a contribution. "To reach these targets, a Smart -- which is the CO2 champion today -- has to contribute maybe 5 percent in the next years, and we with the large cars have to contribute 20 percent, or whatever," he said. His boss, Daimler Chief Executive Dieter Zetsche, coined a slogan for the group's efforts: "More power, less fuel".

Ford of Europe head John Fleming said customers want it all. "I believe if you go forward five or six years you'll see our vehicles with probably smaller engines which are more CO2 and fuel efficient, but people want performance, too," he said.

Al Bedwell, senior manager at J.D. Power Automotive Forecasting, said big cars would continue to exist and find willing buyers. "In terms of people suddenly going out and buying small vehicles just to save the planet, (it is) not really (happening). People are not interested in those kinds of moves. It is only going to happen through fiscal and regulatory measures," he said.

At France's Renault, strategy chief Patrick Pelata said a lot of hybrid petrol engines gave only limited CO2 reduction for a high price, and in the end they still performed worse than a diesel. "In Europe, a hybrid engine offers no improvement compared with a good diesel engine. With a hybrid engine, it costs you 1,000 euros to save a ton of CO2, while the quantity is priced at 30 euros on the CO2 derivatives market," Pelata said.