EUROPE

1. Irish EPA Says Meeting New WHO Air Quality Standards Could Pose Challenge
2. France Reportedly To Increase Tax on High-Emission Cars
3. Technical Issues Blamed for France’s Latest Delay of Eco-tax on Trucks
4. Denmark, Portugal Leading the Way for Low Car Emissions
5. Scotland Releases Its Plug-In Vehicle Roadmap
6. Food Price and Climate Fears Push EU to Put a Lid on Biofuels
7. EuropeReportedly Weighing 40 Percent 2030 Carbon-Cutting Goal
8. Rapporteur Pushes For Setting Clean Fuel Targets
9. Lorries Proposal ‘Threatens Combined Transport’
10. Denmark’s DFDS Sees Shipping Hit by Sulfur Regulation
11. Gothenburg Pays Out SEK 2M for Using Low-Sulfur Bunkers
12. EU Weighing the Options for Reducing Ships’ CO2
13. EU Parliament Panel Rejects Resolution to Bolster Carbon Market
14. Germany Wins Renegotiation of Car CO2 Rules
15. Spain Offers Subsidies to Buyers of Electric, Hybrid Vehicles Who Turn in Older Models
16. EU Air Quality Package to Look Beyond 2020
17. EU Largely On Track to Meet Climate and Energy Targets
18. EC Plans to Apply ETS to EU’s Regional Airspace
19. Biofuels Reform on Ice as Mandate Denied
20. Italy’s Urban Air Quality Worsening; Minister Calls for Stricter Enforcement
21. Serbia Has Transitioned to 10 PPM Sulfur Fuels
22. Ireland’s Greenhouse Gas Emissions Rise Prompts Call for Higher Carbon Price

NORTH AMERICA

23. U.S. Airlines Show Wide Gap in Fuel Efficiency: Study
24. CARB Details Low-NOX Engine Rule
25. Governor Brown Will Sign Bills Extending Fees, Incentives to Reduce Emissions
26. Truckers Support Air Board in Diesel Pollution Crackdown
27. Better Air Quality Linked to Longer Life Expectancy
28. High Court’s Air Cases Are Most Significant Environmental Suits in 2013 Term
29. U.S. Justices to Hear Challenge to Obama on Climate Change
30. EPA Confirms Tier 3 Delay ................................................................. 29
31. US Judge Rejects Alaska Suit Against ECA .................................................. 30
32. EPA, Carnival Agree To Emission Control Area Exemption ....................... 32
33. U.S. Diesel Auto Sales Increase 41% in August 2013, Hybrid Sales Jump 38% .... 33
34. Railroad Agrees To Clean Up Freight Yard Air Pollution .......................... 33
35. Appeals Court Backs Fuel Plan of California Climate Law ........................ 34
36. Lawmaker Says Action by EPA on Biofuels Could Head Off Legislation .... 35
37. Shell to Pay $1.1 Million in Fines for Arctic Air-Quality Violations ............. 36
38. Canada's Railways Extend Voluntary Accord to Reduce Pollutants, GHGs .... 36
39. New England Governors, Canadian Premiers Pledge to Cooperate on Clean Energy .......................... 38
40. D.C. Circuit Rejects as Moot Truck Makers' Suit over EPA Air Rule Waivers ... 39
41. Eight U.S. States Band Together To Promote Clean Cars .......................... 40
42. U.S. Energy-Related Carbon Pollution At Lowest Since 1994 ..................... 40
43. Canada Says Falling Short Of Emissions Reduction Target ......................... 41
44. High Levels of Carcinogens Found Downwind of Alberta Oil Sands Region ... 42
45. GM To Sell Car Next Year Powered By Gasoline or Natural Gas ................. 43
46. Kia Plans To Offer Soul Electric Car In U.S. Next Year ............................... 44
47. US EPA Says Nothing Final on Ethanol Blend .......................................... 44
48. API to EPA: Expect Suit If 2014 Renewable Fuel Quotas Are Late .......... 44
49. Eastern States Fear Ship Air Rule Delay Would Hinder Ozone Reduction Plans .... 45
50. Kerry: Countries Have Responsibility to Work Together on Climate Change .... 46

51. Recent Developments in China .............................................................. 47
   Beijing Makes Strong Case for Aggressive Air Pollution Action Plan .............. 47
   Traffic Jams Test Beijing's Patience ......................................................... 49
   China Issues Comprehensive National Air Pollution Plan; Targets Key Regions ...... 50
   China Resolved To Fight Against Air Pollution .......................................... 53
   China Misses Opportunity to Skip to China 6 Vehicle Emissions Standards ...... 54
   China Updates Alternative Energy Vehicle Subsidies, Expands Demonstration Areas .... 54
   China Raises Prices Of Cleaner Fuels to Incentivize Refiners, Control Emissions .... 56
   Sinopec to Offer China IV Gasoline Nationally, China V in Select Areas Ahead of Schedule .... 57
   Refinery Projects Suspended After Companies Fail to Meet Emissions Targets ... 57
   China to Publish Monthly List of 10 Worst Polluted Cities ............................ 60
   Report Says Pollution Worse in August than in July .................................... 60
   China, California Agree to Collaborate To Combat Climate Change for Two Years .... 62
   China should pursue 'high-quality' urbanization: top economic planning body ... 62
   World Bank Chief Urges China to Better Manage Urbanization .................... 63
   Smog Emergency Shuts City of 11 Million People ..................................... 63
   MEP To Send Air Pollution Inspection Teams To Provinces .......................... 64
   MEP Releases Some Details on Polluting Companies ................................... 65
   NDRC Increases Subsidies for Coal-Fired Units Using Cleanup Technology ... 65
   Sinopec to Spend $5 Billion on Cleaner Fuel Upgrades Annually ................. 66
   Shanghai To Reduce PM2.5 20% By 2017 ................................................... 66
   China Reports Drop in Major Pollutants Emissions ....................................... 68
   Environmental Protection Amendment Not Put To Vote after Third Reading ...... 68
   Beijing Discusses Ban on Idling Motor Vehicles ......................................... 69
   Beijing to Ban Half of Private Cars on High-Pollution Days ......................... 71
   Study Shows Smaller Particles Most Harmful ............................................. 72

52. Hong Kong Welcomes China's Air Pollution Measures, To Curb Emissions Too .... 73
53. Japan Revises Regulations to Accommodate Fuel Cell Vehicles .................. 74
54. Solid Particles From Outside Add To Pollution in Delhi Air ......................... 74
55. Coastal Cities in Asia Most at Risk from Natural Disasters, Study Says .......... 75
56. Australian Government Axes Climate Science Body, Targets Other Agencies .... 76
57. INDIA: GM Emissions Violation "Corporate Fraud" - Report ..................... 77
58. India Sticks to Its Stand on HFCs ......................................................... 78
59. Tighter Emission Standards for In-Use Diesel Vehicles in Singapore .......... 79
60. Southeast Asian Leaders Approve Joint Monitoring System to Stem Haze ....... 79
EUROPE

1. Irish EPA Says Meeting New WHO Air Quality Standards Could Pose Challenge

Ireland enjoys good air quality compared with other European countries but meeting proposed new standards could be a challenge, according to a new report. The Environmental Protection Agency ‘Air Quality in Ireland 2012’ report highlights concerns over levels of particulate matter, especially during winter when increased use of certain heating fuels can effect air quality.

The report notes the World Health Organization (WHO) has developed guideline standards for air quality which are tighter than current EU standards. If these are adopted by the EU, Ireland will face a challenge in meeting the new standards because Irish levels of particulate matter currently exceed the WHO guidelines, the report says.

In general the report is positive. “Overall, relative to other EU member states, Ireland continues to enjoy good air quality, with no exceedances for the pollutants measured in 2012. This is due largely to the prevailing clean westerly air-flow from the Atlantic, a small number of large cities and an industrial sector which is relatively clean and well regulated,” the report says.

But director general of the EPA Laura Burke warned that changes would have to be made to maintain good air quality. “While people have been enduring so much hardship in recent years, one small consolation has always been that at least we live in a country where the environment is in good shape and the air is clean. Unless we make changes, we cannot continue to rely on that,” she said.

The report says to ensure good air quality, Ireland must continue to enforce the ban on bituminous, or ‘smoky’, coal. It goes on to say households and businesses should look to more efficient methods of burning fuel and also move from solid fuels to cleaner alternatives.

Burning of solid fuel and emissions from car exhausts remain the main sources of poor air quality in Ireland. The EPA said Ireland needed to reduce traffic emissions by implementing policies to reduce travel demand and to increase the use of alternatives to the private car such as cycling, walking, and public transport and improve the efficiencies of motorized transport.

Air pollution can negatively affect human health and wildlife ecosystems. The report says Ireland has seen a significant improvement in its ambient air quality since the introduction of a number of EU-driven legislative measures since the early 1990s. Under current EU legislation, Ireland is required to reduce exposure to fine particulate matter (PM2.5) by 10 per cent between 2012 and 2020.

2. France Reportedly To Increase Tax on High-Emission Cars

France is to raise the maximum levy on purchases of cars with high emissions to 8,000 euros from 6,000, a measure that could bring in 100 million euros ($133.53 million) in tax receipts next year, newspaper Les Echos has reported. The new measure is also expected to include a curb on subsidies for low-emission vehicles, the newspaper said, without citing its sources.

The tax on high-emissions vehicles was established in 2008 and, for the most part, has been successful, increasing the adoption of cleaner vehicles. The news article brings up a point that the tax plan doesn’t cover. A tax on high-emissions vehicles, a penalty, does work for some, but
without a corresponding incentive on clean vehicles, does the law go far enough to encourage adoption of cleaner vehicles? Without a corresponding incentive on hybrid and electric vehicles, France could be missing out on the opportunity to push adoption of the cleanest options.

For now, the law favors low-emissions conventional diesel vehicles, but France is planning to make adjustments to the penalty/incentive landscape. The expense of low-emissions hybrid and electric vehicles is, in a way, its own penalty, similar to the artificially-induced tax on the high-emissions vehicles.

3. Technical Issues Blamed for France's Latest Delay of Eco-tax on Trucks

Technical problems have once again forced France to postpone implementation of its so-called eco-tax on heavy trucks, this time until January 1, 2014, the government announced on September 5th. The national tax assessed on large trucks' use of French national and local roads, excluding toll roads run by concessions, is aimed at reducing carbon dioxide emissions from transportation by pushing companies to use cleaner means, such as rail or river freight. The tax, originally included in the Grenelle 2 environmental framework law passed in 2010 and later fleshed out in several implementing decrees, was to apply starting October 1st to French and foreign trucks exceeding 3.5 metric tons.

At a rate estimated at 12 euro cents (16 cents) per kilometer, it was expected to bring in some €1.2 billion ($1.58 billion) per year in tax revenues, some of which would fund alternative transport infrastructure investments and public transportation.

Businesses have fought to have the tax scaled back or eliminated, and the government has delayed its application several times, citing technical issues. Environmental groups criticized the latest delay as a result of heavy lobbying by the trucking industry. The Association of Users of Freight Transport (AUTF), for example, has urged the government to reduce the tax, arguing that imposing it during the country's current economic problems could hurt business and employment.

France Nature Environment (FNE), the country's biggest network of environmental associations, said the tax would cause companies to make a better use of road transport, by using fewer trucks to transport the same volume of merchandise. The government's postponement of the tax "is a very bad sign, as the government prepares to hold an environmental conference" this fall, they continued. The government has scheduled a Sept. 20-21 environmental conference to take stock of progress on commitments made at a 2012 conference to begin transforming the country's economy toward greater reliance on renewable energy and sustainable development.

A 2011 update of the 1999 EU Eurovignette Directive allowed EU member states to increase taxes on operators of heavy trucks on toll-based expressways, in particular to compensate for pollution these vehicles cause. That update also allowed EU member states to implement kilometer-based taxes on non-toll roads. Some 10 EU countries have or plan such a tax, including Germany, Austria, and the Czech Republic, and France has tested one in its Alsace region.

Under France's pending national system, French and foreign trucks subject to the tax must be equipped with an onboard electronic box that communicates with roadside detection devices and a satellite global positioning system to send data to a central computer that calculates the tax, which will vary based on a vehicle's emissions of carbon dioxide and other pollutants. Since July 19th, the company Ecomouv was supposed to register some 800,000 French and foreign trucks of more than 3.5 metric tons, but the government said that, due to "persistent malfunctions," only
some 20,000 trucks have been registered so far. The government said these problems “must imperatively be corrected before the system can be started.”

The eco-tax was one of 268 commitments to come out of the Grenelle Environment Forum of October 2007 in Paris, at which the government of then-President Nicolas Sarkozy formulated new initiatives and policies for sustainable development and renewable energies. The current government, under Socialist President François Hollande, blamed the many delays of the tax to “the previous government’s poor planning and a failure to anticipate difficulties.”

4. Denmark, Portugal Leading the Way for Low Car Emissions

Portugal boasts the second lowest level of CO2 vehicle emissions in the European Union according to a new report released by the European Transport Federation, T&E, to which the Portuguese non-governmental organization Quercus contributed.

The study found that the Portuguese passenger vehicle fleet emitted an average of 117.7 gCO2/km in 2012 a result bettered only by Denmark and just ahead of the Netherlands.

**Denmark** has improved its position steadily over recent years to first in 2010 and now again in 2012. In 2007, the Danish vehicle purchase tax (which has for a long time been high) was restructured to be much more strongly based on CO2. This made a huge difference in fleet average CO2. But it also lowered average tax rates and hence increased car sales. Annual circulation taxes are also graduated according to fuel economy.

**Portugal** drops to second place after leading the field in 2011. In Portugal relatively few cars are bought new and they are on average smaller than the average for the EU as a whole. Fuel taxes are high and vehicle taxes are also steeply differentiated against CO2. All these factors help explain Portugal’s continued strong showing.

**The Netherlands** has now joined Denmark in rising furthest and fastest in the rankings over the past six years. It also shows the greatest reduction of any Member State since 2005, at just over 30%. This is largely due to an initial registration tax that is strongly graduated according to CO2 emissions, as well as exemptions from circulation tax for very low-CO2 vehicles and CO2-based differentiation of the taxation of ‘benefit in kind’ payments for company cars. The thresholds and emission categories were further revised downwards in 2012 to incentivize the lowest emitters and this seems to be driving a continuing improvement. But the same applies as in Denmark; average tax rates have fallen, with uncertain rebound effects on car sales.

The study\(^1\) compares the progress made by automobile manufacturers towards targets set for fuel consumption and CO2 emissions due to be reached by 2015.

5. Scotland Releases Its Plug-In Vehicle Roadmap

The Scottish government has published a new analysis\(^2\) of the use of hydrogen fuel and fuel cell technology in the country. The analysis focuses on the use of hydrogen fuel in transportation and the viability of hydrogen-powered and hybrid vehicles. The analysis provides an outline of how the country aims to pursue hydrogen fuel through 2050.

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1. How clean are Europe’s cars? An analysis of carmaker progress towards EU CO2 targets in 2012, September 2013, T&E.
2. “Switched On Scotland: A Roadmap to Widespread Adoption of Plug-in Vehicles”
By 2050, Scotland aims to be emissions free. This is to be accomplished through the use of various forms of renewable energy, which will replace fossil-fuels in the country in the coming years. Transportation is associated with a significant level of emissions in the country and has become a target for Scotland. Hydrogen fuel cells are gaining more attention because they can be used to power vehicles.

The analysis does highlight some of the economic benefits that could be attained through the adoption of hydrogen fuel in the transportation sector. Currently, the majority of the fuel that Scotland uses to power transportation comes from foreign countries. This is a significant financial investment for the country, especially as political tensions around the world cause the price of this fuel to grow.

The analysis also takes note of the challenges that exist in introducing hydrogen fuel to the transportation world. The infrastructure needed to support hydrogen-powered vehicles is currently lacking, making it difficult for consumers to justify the adoption of these vehicles. Moreover, fuel cells are notoriously expensive, which means that the vehicles that make use of them will also be expensive.

6. Food Price and Climate Fears Push EU to Put a Lid on Biofuels

The European Parliament has voted to limit the use of fuels made from food crops because of fears that biofuels can push up grain prices or damage the climate, further undermining the once booming industry. Lawmakers set a ceiling on the use of such fuels at 6 percent of overall transport fuel demand in the European Union in 2020.

Although slightly higher than the 5 percent cap proposed by the European Commission in October, it deals a blow to EU biofuel producers by effectively preventing them from increasing current output.

In 2009, the bloc set a target for a 10 percent share of renewable energy in transport, with almost all of it to come from so-called first generation crop-based fuels. Biofuels, such as ethanol made from sugar or biodiesel from rapeseed, are blended with conventional transport fuels and added to vehicle fuel tanks. They were originally intended to reduce transport carbon emissions and cut Europe's dependence on imported oil. But faced with claims that Europe's thirst for biofuels was driving up global food prices, and scientific evidence that some biofuels are more harmful to the climate than even conventional fossil fuels, the Commission was forced into a rethink.

With first generation biofuel consumption already at around 5 percent of total EU transport demand, and with almost enough installed production capacity meet the 10 percent target, a limit of 5 or 6 percent would bring a pause to the once booming industry and force some existing plants to close.

Lawmakers backed an amendment that would force energy companies from 2020 to take account of the indirect emissions caused by crop-based biofuels, which increase overall demand for land and, as a result, encourage rainforest clearance or draining peat land. That would effectively ban the use of biodiesel from oil crops such as rapeseed, palm and soy, which according to the EU's scientific models are more damaging than conventional diesel when their overall impact on the environment is taken into account. The biodiesel industry says the scientific models used in the studies are highly uncertain and based on flawed assumptions.
In order to try to make up the shortfall created by the cap on first-generation fuels, the parliament said the EU should set a new 2.5 percent sub-target for the use of advanced, non-crop fuels made from algae or agricultural waste in 2020. A coalition of industry and environmental groups - including the European Climate Foundation and Danish advanced biofuel producer Dong Energy - have said that full sustainable use of agricultural and forestry waste could supply 13 percent of EU road transport fuel by 2020.

One aspect of the vote that offered a glimmer of hope to the biofuel industry was that lawmakers demanded further talks about the rules before opening negotiations with EU countries to finalize them. With EU governments yet to finalize their common position, talks on the proposals look likely to extend into next year. If they are not concluded by April, European Parliament elections scheduled for the following month could push back the law until 2015.

7. Europe Reportedly Weighing 40 Percent 2030 Carbon-Cutting Goal

European Union regulators are considering doubling the bloc's target to cut greenhouse gas emissions by 2030 and setting a tougher binding goal for renewable energy use, EU sources have told the press. The European Commission outlined new targets earlier this year but has yet to follow up with a firm legislative proposal. That is expected around the end of the year.

Speaking on condition of anonymity, one source said the Commission was considering two legal targets to follow the three green energy goals that expire at the end of this decade. They would be a 40 percent carbon-reduction goal and a 30 percent renewable energy use target to build on the 2020 targets of a 20 percent carbon cut from 1990 levels, a 20 percent share of renewable energy and a target to improve energy savings to 20 percent.

Some commissioners reportedly opposed the goals and the debate is expected to be difficult.

In addition to cutting domestic emissions by 40 percent, another source said the EU could commit to further cuts through international offsets if a global climate change deal is agreed. The source added Commission experts were analyzing the economic impact of a 35-45 percent range for carbon cutting.

Traditionally, EU climate policy has been the preserve of the Commission's climate and energy departments. But Europe's economic struggles have prompted influential officials, including EU Economic and Monetary Affairs chief Olli Rehn, to insist green policy must not undo fragile recovery.

The European Union's goals can influence the international debate on climate change and also have a bearing on the European Union's Emissions Trading Scheme (ETS), which fell to record lows earlier this year under the burden of surplus permits. Tougher policy goals could help to limit the oversupply of carbon allowances.

If agreed, the new European goals would be more ambitious than other nations have managed. The U.S. Senate has refused to legislate cuts favored by U.S. President Barack Obama and Australia's new conservative Prime Minister Tony Abbott, who won power last month, has promised to scrap taxes on carbon pollution.

Member states appear deeply divided.
The UK, Finland and Czech Republic would like to see only one target, for decarbonization, while Romania believes member states should be allowed to set their own renewables targets, with energy efficiency goals remaining aspirational.

Other countries including Poland, Estonia and Cyprus want member states to take back greater control over their energy mixes.

Fourteen national governments responded to an EU consultation on the 2030 climate and energy package. Denmark, France and Lithuania are backing the continuation of the current system of three EU-wide targets. Denmark wants all targets to be binding, with carbon reduction set at 40% and renewables at 30%.

Debate on the 2030 package is still at an early stage, with the European Commission due to bring forward a formal proposal in December for consideration by governments and the European Parliament.

The consultation reveals governments’ unease about the effects of low-carbon policies on economic competitiveness, and about the impact of renewables’ variability and subsidies on energy markets. Some have indicated their opposition to the EU’s climate ambition continuing to outstrip efforts in non-European countries.

“The EU should embark on thorough decarbonization only if other regions are also committed to strong reductions of greenhouse gas emissions,” Romania said, adding that “the costs of promoting low-carbon energy “should be kept moderate and in line with those of other geographic areas”.

Poland too wants the 2030 targets to be “strongly correlated with the on-going international negotiations on a global climate agreement by 2015”.

Governments’ responses also indicate that the role of nuclear power in the EU’s energy mix could play a significant part in the 2030 debate. Romania for example argued that decarbonization with a large share of nuclear in the energy mix would be far more cost efficient than relying on renewables.

Poland and Czech Republic are pushing for strict technology neutrality.

A number of countries expressed a preference for fewer sector-specific targets, as this allow them to adapt decarbonization goals to their own national circumstances. Harmonized rules are not always appropriate for Estonia, its government said. For example, planned sustainability criteria for biomass could prevent it from achieving its 2020 renewables target and the methodologies for calculating fuels’ life-cycle emissions are likely to hurt its oil shale sector.

Energy saving targets should only be considered or established after a planned 2014 review of the energy efficiency directive, according to a number of governments.

The stringency of the EU’s carbon reduction goal for 2030 will depend on the outcome of upcoming international climate talks in Warsaw and Paris, energy commissioner Günther Oettinger has said. “It seemed today that the member states agreed the European Union’s goal for reduction of CO2 emissions could also be conditional. When we... reach agreements with [other nations] to make significant CO2 reductions – here I’m talking about the US, China, India – then this will affect our goals as well,” he said.
At the meeting, Lithuanian energy minister Jaroslav Neverovic said member states want an “optimum decision” that will “safeguard the competiveness of our industries and avoid additional burdens for consumers”.

The EU’s existing pledge to increase its 2020 carbon reduction goal to 30% is conditional on industrialized countries committing themselves to comparable reductions and emerging economies “contributing adequately according to their responsibilities and respective capabilities”.

8. Rapporteur Pushes For Setting Clean Fuel Targets

The EU needs alternative fuel targets to reduce its dependence on oil and cut CO2 emissions, center-right MEP Carlo Fidanza, who is rapporteur on a plan to develop a network of fuelling stations, told the parliament’s transport committee. But member states could be given more time to meet them, he said.

EU transport ministers have raised great reservations about the European Commission’s plan, which sets national 2020 targets for electric charging points and other alternative fuels such as hydrogen and natural gas. But a previous committee debate showed that parts of the transport sector support it.

Mr. Fidanza told his committee colleagues that without binding targets, “there would not be much point in working on this directive”. So far he has focused on strengthening the commission’s proposal. For example, he wants member states to set targets for both alternative fuel use and infrastructure in all transport modes, including aviation.

Mr. Fidanza also wants a higher density of compressed natural gas (CNG) refueling stations for passenger cars and light duty vehicles.

But regarding liquefied natural gas (LNG), which is aimed at lorries and ships, the rapporteur calls for a “sufficient number” of refueling points for maritime and inland waterway transport “within adequate distances”. The EU executive wants fuelling stations at all ports on the Trans-European Transport Core Network.

The rapporteur faces opposition in the parliament committee over his proposal to develop a refueling network for liquid petroleum gas (LPG). LPG is usually a by-product of refining and already has a relatively well-developed infrastructure. “It is not an alternative to oil,” noted Gesine Meissner of the ALDE group. Shadow rapporteurs from other political groups also urged caution.

Committee members welcomed Mr. Fidanza’s proposal for a transition period to fully standardized electric charging as well as his focus on consumers.

A committee vote is due on 14 November.

9. Lorries Proposal ‘Threatens Combined Transport’

Plans to make lorries more aerodynamic, reducing fuel use, must not impede the development of combined transport using rail which has a greater potential to cut CO2, the parliament’s transport committee has heard. Speaking to committee members, Austrian MEP Jörg Leichtfried said the
proposed changes to the directive on the maximum weight and dimensions of lorries must not contradict a 2012 regulation on external parts and devices.

Examples of aerodynamic devices include air foils and so-called ‘boat tails’. An industry study has shown that, at high speed, aerodynamic losses account for 15 to 22% of fuel use of a typical tractor semitrailer in the US. “What will happen in combined transport if these air foils are two meters long?” asked the Austrian MEP. “We need to look at the technological justification of all these measures,” he added.

He also reiterated the committee’s view that a proposal to allow mega-lorries to circulate more freely between member states would undermine one of the major aims of Europe’s transport policy – to bring about a modal shift from road to rail.

MEPs want the EU executive to carry out an impact assessment on the costs of the mega-lorry proposal and its effects on the use of rail freight.

10. Denmark's DFDS Sees Shipping Hit by Sulfur Regulation

Some shipping firms will likely go out of business and others will be forced to close routes in 2015 when environmental rules on fuel oil are tightened in parts of Europe, Niels Smedegaard, chief executive of Danish shipping group DFDS A/S, said.

Smedegaard was discussing the impact of International Maritime Organization rules that will from 2015 dictate that shipping fuel sulfur content should be cut to 0.1 percent from 1.0 percent in coastal waters such as the North Sea, the Baltic and the English Channel. The European Union adopted the regulations last September.

DFDS, best known for its passenger ferries but whose main business is transporting trailers and trucks, has most of its 50 vessels deployed in these Emission Control Areas where the new rules will have a major impact, as cleaner replacement fuels are around 40 percent more expensive.

DFDS spends around 1.8 billion Danish crowns ($320 million) a year on fuel and has invested 400 million equipping eight of its ships with scrubbers - 70 ton devices that remove sulfur from exhaust gases. The new regulations allow for such solutions as long as they have the same environmental effect as using low-sulfur fuel.

But not all ships are able to use a scrubber and some are just too old to be worth lavishing millions of crowns on. DFDS is therefore considering relocating some vessels to southern Europe, where the regulations come into effect only from 2020. DFDS has only one route in the Mediterranean, operating between Marseilles in southern France and Tunis in North Africa.

11. Gothenburg Pays Out SEK 2M for Using Low-Sulfur Bunkers

The Port of Gothenburg recently announced that it has paid SEK 2 million ($315,000) to shipping companies that agree to use low-sulfur fuel. The "Improved Fuel Quality" program provides up to SEK 125,000 ($19,700) every six months to ships that use fuel with a maximum sulfur content of 0.1 percent. The port said the subsidies helped reduce sulfur emissions by 100 tons last year and eliminated 60 tons of the pollutant in the first six months of 2013.
"The program is a means of encouraging shipping companies to contribute to cleaner shipping and prepare for the stricter EU Sulfur Directive, which will come into force on January 1, 2015," said Anna Jivén, acting environmental manager at the Port of Gothenburg. "

"The reduced sulfur emissions during the first six months of 2013 indicates that the emissions will be even lower than last year," she said.

The payments, which are available to ships using either low-sulfur bunkers or alternative fuels including liquefied natural gas, come from a surcharge on ships using fuel with more than 0.5 percent sulfur content.

Companies participating in the program include Maersk Line, Thun Tankers, Stena Oil, Top Oil, Scandinavian Shipping, and OW Bunker, and new companies signing on will receive payments in 2014.

12. EU Weighing the Options for Reducing Ships' CO2

The EU executive has been consulting on measures to cut CO2 from shipping as it is preparing to table legislative proposals. According to the IMO, global emissions from this sector could triple by 2050 without intervention. The sector is opposed to entering the EU's emissions trading scheme (ETS), one of the policy options being considered by the Commission as part of its consultation. Some shipping trade associations have pointed to the problems encountered by the EU after integrating airlines in the ETS.

Although resistant to a regional scheme, the sector would prefer paying into a compensation fund. This charge on fuel would encourage emission reductions and fund the development of low-carbon technologies and contribute to international climate finance. Other options are a carbon tax or binding targets.

Whatever policy Brussels proposes, it should drive further action by the International Maritime Organization (IMO). The plan to include airlines in the ETS has made the International Civil Aviation Organization (ICAO) "do more in the past year than in the last ten years", said Matthew Grey of investment banking firm Jefferies.

The IMO will continue discussing market-based measures. A range of measures, including offsetting emissions above a target, an energy efficiency 'feebate', and an efficiency credit trading scheme have been put forward. EU member states favor emissions trading or a compensation fund.

Although talks on carbon emissions are dragging on, the UN maritime agency has made important progress on another front. The energy efficiency design index (EEDI), phased in from next year, sets increasingly stringent standards on the fuel efficiency of cargo transport for ships built across the world. It will be the first time a mandatory climate-related regime applies to a global industry, covering new bulk cargo carriers, container ships and similar vessels. It should cover 72% of new ships' emissions.

The IMO expects the EEDI to cut CO2 emissions by about 45 million tons in 2020, and by 180-240Mt in 2030. But it admits that a market-based measure is still needed. The EEDI mainly applies to ships powered by conventional heavy fuel oil (HFO). But the sulfurous fuel seems to be on the way out, being killed off by its price and tighter pollution limits agreed at international level. The price of oil has leapt up in recent years and now forms about half of vessels' operating costs.
Tighter restrictions on the sulfur content of maritime fuels will drive up costs even further over the next decade.

But oil is not the only fuel for ships. Gas power and other propulsion technologies are being increasingly adopted, although take-up is still limited. Liquefied natural gas (LNG) is about half the cost of low sulfur HFOs on the European market and ships running on it emit about a quarter less CO2. LNG also produces virtually no sulfur oxides and about 80% less nitrogen oxides – facilitating entry into emission control areas (ECAs), such as the North Sea and around North America. They are being considered by Japan and other states.

But the main problem with LNG is its limited availability. Infrastructure costs are significant, future demand is uncertain and handling the liquefied gas at -162 degrees centigraide is challenging. LNG-fuelled ships are also about 20-25% more expensive to build and gas needs about 60% more storage space than oil.

The EU executive has had talks this year with ship owners and ports on how to speed up LNG adoption and will launch a stakeholder platform in the autumn. The European Maritime Safety Agency is also set to publish rules and standards on gas bunkering by the end of the year, following consultation this November.

Barriers to LNG adoption are much lower for ships such as the Finnish-built Viking Grace which are designed for a point-to-point route, particularly within emission control areas. This state-of-the-art gas-electric ferry, the first of its kind, will ply the waters between Finland and Sweden from next year.

Other environmentally friendly technologies being introduced include more streamlined hulls, low-friction coatings and fixed sails. Mitsubishi also claims its bubble lubrication system cuts fuel consumption by 7% or more. The firm is building it into two ships for the German cruise line AIDA.

But such radical developments may not be appropriate, or possible, in existing ships. Accordingly, the IMO agreed a counterpart to the EEDI last year – the ship energy efficiency management plan (SEEMP). Under the agreement, ships more than 400 tons will be required to have such plans from January.

Combined with the EEDI, SEEMP plans should cut CO2 emissions by up to 180Mt each year by 2020, or 9-16% compared with business-as-usual, says the IMO. By 2030, it should save up to 390Mt, and between $85-150bn in fuel costs each year.

SEEMPs, the high price of oil and tough business conditions worldwide are giving greater impetus to improving energy efficiency.

Routing to avoid adverse weather, optimizing draft and monitoring fuel consumption are all already commonly implemented, or planned, by shipping firms. But a lack of certainty on the cost and benefits of particular measures often holds back action.

There are also structural barriers, such as owners having little incentive to save energy, as charterers pay for fuel. And contract terms and first-come-first-served policies at ports may thwart cutting speed, which is an easy way of cutting CO2. But shipping organizations are starting to resolve these issues and there will be more pressure on them to do so as carbon measures start to bite.
13. EU Parliament Panel Rejects Resolution to Bolster Carbon Market

The European Parliament's Environment Committee has rejected a resolution to bolster the European Union's carbon market and swiftly adopt a climate and energy policy package for 2030. The panel, which leads parliamentary work on legislation linked to the EU's 53 billion euro ($71.6 billion) Emissions Trading System for greenhouse gases, voted 32-27 on September 18th against the nonbinding opinion in Brussels.

The committee's verdict comes as the 28-nation EU considers options to improve the world's biggest carbon market after prices dropped to a record low in April. The Parliament earlier this year backed a short-term rescue plan for the emissions program, known as backloading, overcoming opposition by energy-intensive companies and some member states including Poland.

The rejection of the resolution, which was meant to express the Parliament's opinion on a carbon-market report by the European Commission last year, is the “worst-case” scenario, according to Matthias Groote, head of the environment panel. The committee failed to approve it after some members of the European People's Party, the biggest political group in the Parliament, decided to oppose it, he said.

The EPP could not support the final version of the measure after the panel approved an amendment that called on the commission to propose increasing the EU's greenhouse gas emission reduction target to 25 percent in 2020 from the current 20 percent, according to Eija-Riitta Korhola, a Finnish member of the group.

In 118 amendments to the resolution, members of the committee also proposed steps including improving the EU ETS by setting up an independent authority to monitor the functioning of the market, increasing the pace of carbon reduction and permanently withdrawing at least 1.4 billion allowances. None of those proposals was accepted.

14. Germany Wins Renegotiation of Car CO2 Rules

A meeting of environment ministers saw widespread support for Germany's proposal to renegotiate the deal struck with MEPs. The country is pushing for more generous rules on how European car manufacturers must meet their carbon emission reduction targets. Member states still hope to achieve agreement at first-reading, potentially within a matter of weeks. But the European Commission and a number of countries warned that reopening talks could prove to be a can of worms.

Germany was backed by the United Kingdom, Hungary, Slovakia, Poland, Estonia and Portugal. While Spain supports the June deal it also recognized that a new compromise was needed for political reasons.

Sweden, Greece, France, Belgium, Romania, Bulgaria, Latvia and Luxembourg expressed support for pushing through the existing agreement, with Denmark and Italy particularly opposed to any renegotiation. Denmark said Germany's latest flexibility proposal – to delay full implementation of the 95g CO2 per kilometer target from 2020 to 2024 – would cause emissions of 200 million extra tonnes of CO2 over the lifetime of the vehicles.

Climate commissioner Connie Hedegaard said that the existing deal balanced the EU’s climate targets for the automotive sector with competitiveness concerns, leaving little potential to make
major amendments. The UK’s minister noted that MEPs would not welcome the move. “We should be under no illusion about their reaction – we need to be realistic about the room for maneuver with [the European Parliament],” he said.

Berlin argued that the agreement would cost jobs and damage its premium auto makers. German carmakers Daimler and BMW produce heavier and less fuel-efficient vehicles than those from firms such as Italy's Fiat, meaning they would find it challenging to meet a proposed EU cap on carbon emissions of 95 grams per kilometer for all new cars from 2020. "It's not a fight over principles but how we bind the necessary clarity in climate protection with the required flexibility and competitiveness to protect the car industry in Europe," Germany's Environment Minister Peter Altmaier said. "I am convinced we can find such a solution. We can find it in the next weeks," he said.

Environment campaigners say Germany is abusing the EU's democratic process, throwing away the chance to make European cars more energy efficient and to reduce the bloc's dependency on oil imports.

British-based consultancy Cambridge Econometrics researched how much Europe would save on oil imports if the 95 g/km target was implemented across the EU fleet. It found the EU as a whole would save around 70 billion euros ($94.94 billion) per year, while Germany would save 9 billion euros in fuel bills.

Although Germany managed to get the support of other EU ministers on Monday, many member states have voiced unease at the manner in which Berlin blocked the deal. Sweden's Environment Minister Lena Ek said the risk was that further delays could hold back adoption of the rules until 2015 because of impending European Parliament elections next year and the appointment of new commissioners. Germany would bear "a very heavy responsibility", she told reporters.

As well as seeking to protect its carmakers, Germany also wants to avoid the car emissions law complicating its decision on forming a new governing coalition. The German Greens are strongly in favor of cutting CO2 to 95 grams per kilometer, but Chancellor Angela Merkel and her conservatives support the German carmakers.

Germany argued that the 95 g/km limit should be phased in through 2024, with 80 percent of new cars complying, on average, with the threshold by 2020, followed by 85 percent in 2021, 90 percent in 2022, 95 percent in 2023, and 100 percent in 2024. The 95 g/km limit will supplement an existing limit of 135 g/km set out in a 2009 regulation (Regulation (EC) 443/2009), which began to be phased in in 2012 and must be met by all new cars on average in 2015.

Although the environment ministers decided to reopen talks on the 95 g/km limit with the European Parliament, they gave few details about what they might propose to resolve the issue. Valentinas Mazuronis, the environment minister of Lithuania, which currently holds the rotating presidency of the EU Council, said to reporters that the Council will attempt to come to a new agreement with the European Parliament quickly, and that changes to the June informal agreement will be limited. However, he added that the Council will “define the limits of limited room for maneuver” after meeting with European Parliament representatives.

The Council gave no date for a meeting with the European Parliament on the issue.

Matthias Groote, a German center-left lawmaker who heads the European Parliament's Environment Committee, said in a statement that the reopening of discussions on the 95 g/km
limit by Germany was “holding back innovation as well as EU efforts against climate change.” The June informal agreement should be kept “to ensure further progress towards a low-carbon economy,” Groote said.

Franziska Achterberg, EU transport policy director for the advocacy group Greenpeace, said in a statement that “the European Parliament should stand firm and reject Germany’s demands, which only serve to damage the climate, increase costs for consumers, and stifle technological innovation.” However, she said the Parliament should use the reopening of discussions on the 95 g/km limit to include in the draft regulation a limit for 2025 that would require further emission reductions from automakers.

15. Spain Offers Subsidies to Buyers of Electric, Hybrid Vehicles Who Turn in Older Models

Spain's government has approved subsidies for the purchase of electric or hybrid passenger and commercial vehicles as well as two-wheeled electric vehicles, a step expected to help lower emissions of greenhouse gases and other air pollutants. The discounts will be offered to purchasers who turn in older vehicles for decommissioning.

On October 25th, the Cabinet approved a royal decree to increase by 70 million euros ($96.6 million) direct subsidies for the purchase of qualified light-duty vehicles under a fourth version of its Efficient Vehicle Incentive Program (PIVE-4). The new subsidies, directed at individuals and small and medium-sized businesses, are to be available starting on October 28th. They will be offered for one year or until funds run out, whichever comes first.

The Cabinet also approved its second Plan to Promote the Environment (“PIMA Aire 2” in Spanish) to provide subsidies to both individual consumers and companies to purchase motorcycles, electric bicycles and mopeds. The subsidies, totaling 38 million euros ($52.4 million), will be offered after a second royal decree, approved on October 25th, is published in the National Register. The application period for subsidies will end on December 31st.

According to the government, the new PIVE-4 subsidies will help replace 70,000 older vehicles with more fuel-efficient ones to save 24 million liters (6.3 million gallons) of fuel and avoid 50,000 metric tons of carbon dioxide emissions annually. The government did not say how its Institute for Energy Diversification and Savings (IDAE) calculated these savings.

The industry ministry subsidies, which require that the replaced vehicles be decommissioned, will be offered to purchasers turning in passenger cars older than 10 years and light commercial vehicles older than seven years. The government subsidy of 1,000 euros ($1,380) per vehicle will be applied at participating dealerships. Manufacturers or retailers must offer discounts of at least that much, and can then reclaim the 1,000 euros from the government.

The plan extends to a global array of auto manufacturers and includes models by U.S. automakers General Motors Co. (GM) and Ford Motor Co. The PIVE-4 automatically renews existing agreements with companies.

According to a statement by the Environment Ministry, the PIMA Aire 2 plan for two-wheeled vehicles is part of its effort to “significantly reduce atmospheric contaminants, as well as greenhouse gases” by replacing older models and encouraging “mobility with zero emissions in the urban environment to diminish the level of congestion in cities.” Under the Aire 2 plan, which has now been extended beyond companies to include individual consumers, government
subsidiaries will be applied directly at dealerships, which must supplement them with additional discounts. While subsidies will depend on the type of two-wheeled vehicle, the largest subsidy of 400 euros ($552) will go to electric motorcycles, with an additional dealer discount of 200 euros ($276).

16. EU Air Quality Package to Look Beyond 2020

The forthcoming EU policy package on air quality will set a long-term strategy for cutting pollution in Europe, with new emission ceilings for 2020 and further reduction measures for up to 2030, according to environment commissioner Janez Potočnik. He stressed that the revised National Emission Ceilings Directive (NECD) will not just bring EU legislation in line with Gothenburg goals. It will be a key tool to bring down pollution in the period to 2030.

The NEC Directive implements into EU law internationally agreed air pollution targets under the Gothenburg Protocol to the U.N. Convention on Long-Range Transboundary Air Pollution. The Gothenburg Protocol covers sulfur dioxide, nitrogen oxides, ammonia, volatile organic compounds, black carbon and PM-2.5. As part of a May 2012 update to the protocol, the EU agreed to reduce its emissions of these pollutants by between 6 percent and 59 percent by 2020 compared to 2005 levels. Potočnik said the proposed revision of the NEC Directive will incorporate these reductions and add further emission cuts to be achieved by 2025 and 2030. The addition of methane to the NEC Directive will also be considered, Potočnik said.

“[Gothenburg goals] are perhaps not as ambitious as we would like [them] to be. This is why for 2025 I would like to see much more substantial mandatory emission reduction targets based on the technology that is proven today,” he said. The year 2025 was seen by the authors of the influential TSAP report #10 as an appropriate interim target towards meeting the EU’s long-term air quality objective, which is to “achieve levels of air quality that do not give rise to significant negative impacts on human health and the environment”.

Mr. Potočnik added that the policy package due in December will also include source control measures for the year 2030. “It will create a roadmap for how we can live longer, become healthier and protect our most fragile ecosystems better”.

The commissioner was speaking at the launch of the European Environment Agency’s latest air quality report, which shows that between 2009 and 2011 over 90% of Europe’s urban population was exposed to concentrations of PM2.5 and ground-level ozone above World Health Organization (WHO) guidelines.

The content of the forthcoming package was first outlined by European Commission officials during Green Week. In his more recent speech, Mr. Potočnik confirmed that existing air quality standards will not be revised straight away. The focus should first be on compliance with existing standards, he explained. A revision will be considered “once the NECD has set overall air pollution on the right downwards track”. Other elements of the package include measures to reduce pollution from medium scale combustion installations.

Air pollution is dangerously high across many parts of Europe, resulting in premature deaths, ill health and huge economic losses linked to reduced crop yields, according to EEA. While emissions of some pollutants have declined sharply in Europe in recent decades, more diesel cars and a rise in wood burning by households as a cheap alternative to gas mean other types of harmful pollution are receding more slowly.
A total of 22 European countries exceeded the daily EU limit value for PM in 2011, while stricter, non-binding guideline limits set by the World Health Organization (WHO) were exceeded at most monitoring stations across continental Europe, according to EEA’s report.

EU Environment Commissioner Janez Potočnik said it should be realistic for the European Union to achieve WHO guidelines by 2050 at the latest and debate was ongoing on what kind of interim targets the Commission would propose. "My main objective is to put the EU on a clear pathway towards achieving WHO guidelines," he said at a presentation of the EEA report. "It's a roadmap for how we can live longer, live healthier and protect our fragile ecosystems better."

In the last decade, tighter European regulations on power stations and other sources of pollution have seen a 50 percent cut in emissions of sulfur dioxide, which causes acid rain, while carbon monoxide emissions have fallen by a third. By contrast, the amount of harmful particles and ozone in the air has fallen only slightly. Combined with WHO findings that lower concentrations of air pollution can be more harmful than previously thought, pressure is building on the European Union to do more.

Ground-level ozone pollution - formed indirectly by a combination of sunlight and mixtures of other pollutants in the atmosphere - inflicts huge damage on EU crop production, particularly in Mediterranean countries such as Italy, France and Spain. It has been estimated that ozone pollution resulted in production losses of 27 million metric tons of grain in Europe in 2000.

The increasing number of diesel vehicles on Europe's roads, particularly newer models, are a major source of nitrogen dioxide, one of the main precursor pollutants that form ozone, the report says.

Air quality in the European Union, especially in urban areas, currently falls well short of WHO guidelines, which are recommended targets at which health risks are considered to be "significantly reduced." Air pollution in the EU causes 400,000 premature deaths annually, Potočnik said.

In addition, proceedings against 18 EU countries for failing to meet the limits in the Air Quality Directive are under way, and countries need to make progress on meeting existing limits before new limits are imposed, Potočnik said.

Hans Bruyninckx, executive director of the European Environment Agency (EEA), speaking at the same event as Potočnik, said emissions of the main air pollutants have declined in the European Union but concentrations of pollutants in air remain high.
17. EU Largely On Track to Meet Climate and Energy Targets

European Union Member States are showing mixed progress towards three climate and energy targets for 2020, even though the EU as a whole could reduce greenhouse gases emissions by 21% in 2020 with the set of national measures already adopted. These findings come from a new European Environment Agency (EEA) report 'Trends and projections in Europe 2013'. It considers EU progress in meeting greenhouse gas emission reduction, renewable energy and energy efficiency targets.

The European Union reduced emissions between 1990 and 2012 by approximately 18% - so it is already close to the target of 20% emissions reduction by 2020. The EU was also on track towards its common target for renewable energy consumption – renewables contributed 13% of final energy consumption in 2011, which should increase to 20% by 2020. The collective primary energy consumption of the EU is expected to decrease towards the political objective by 2020, although more policies are needed at Member State level.

While the assessment of Member State progress shows overall relatively good progress towards climate and energy targets, no single Member State is on track towards meeting all three targets. Equally, no Member State is underperforming in all three areas.

Hans Bruyninckx, EEA Executive Director, said: "EEA's latest analysis confirms that renewable energy and energy efficiency are having a significant effect on bringing down emissions. We must keep building on this success - to achieve the emissions cuts demanded by science, Member States must ensure that they are not making choices today that become obstacles to a low carbon future."

Emissions fell almost 1% in 2012, according to approximate 2012 greenhouse gas emissions data published recently. The EEA report also builds on these figures, providing for the first time a complete picture of emission reductions achieved under the first commitment period of the Kyoto Protocol (2008–2012).

The 15 Member States with a common commitment under the Kyoto Protocol (EU-15) are estimated to have reduced emissions between 2008 and 2012 by 12.2%, well beyond the 8% target required under the Kyoto Protocol. Moreover, almost all European countries with an individual greenhouse gas reduction target under the Kyoto Protocol (26 Member States of the European Union, Iceland, Liechtenstein, Norway and Switzerland) were on track towards their respective targets. Two EU Member States do not have an individual target for 2008–2012.

The EU Emissions Trading System (EU ETS) supported many Member States in achieving Kyoto targets. When targets were agreed for ETS and non-ETS sectors, some countries put more
emphasis on achieving emission reductions in economic sectors that are not part of the ETS, such as road transport and households. The EEA finds that these countries need to acquire relatively large quantities of Kyoto emission credits to reach their individual targets. This concerns in particular Austria, Liechtenstein, Luxembourg and Spain.

18. EC Plans to Apply ETS to EU’s Regional Airspace

The European Commission has proposed to apply the EU’s emissions trading scheme to all flights within its regional airspace from 1 January 2014 until a global market-based mechanism to reduce aviation emissions is implemented. The proposal, which follows a meeting of the International Civil Aviation Organization (ICAO) in September, would significantly change the existing ‘stop the clock’ derogation for flights to and from non-European destinations.

However, flights to and from developing countries accounting for only 1% of total revenue ton kilometers of international civil aviation activities will be excluded. This is in line with the de minimis threshold agreed at the ICAO meeting.

The commission also stressed all flights between airports in the European Economic Area – EU countries plus Norway and Iceland – will continue to be covered.

September’s ICAO resolution does not explicitly allow its members to take an airspace approach to emissions trading. It merely says they should “engage in constructive bilateral and/or multilateral negotiations with other states... when designing new and implementing existing market-based measures”.

Climate commissioner Connie Hedegaard said she hoped the proposal will be agreed by the European Parliament and member states by March, ahead of the next 30 April deadline for surrendering aviation carbon allowances.

The lead MEP on the matter, Peter Liese of the EPP group, said the commission’s approach was “better than the current stop the clock because not only inter-European flights are included, but also flights to non-European countries, even if only for the part of the trip that takes place in European airspace.” “In my estimation, the parliament will not agree that, until 2020, we only include inter-European flights in the emission trading and even those flights not entirely, even if some member states should propose to do that,” he added.

ICAO agreed on October 4th to establish by 2016 a market-based system to cut aviation emissions, which would come into effect in 2020. Hedegaard said the proposal for the EU to include intercontinental flights in the ETS insofar as they cross EU airspace is an “interim solution” pending the entry into force in 2020 of the ICAO system.

The commission said in a statement that the directive partially reintegrating intercontinental flights into the ETS would have to be jointly agreed to by the European Parliament and EU Council, which represents the governments of EU member states. The institutions should aim to finalize the directive by April 30, 2014, the commission said. If not finalized by this date, international airlines would be bound by the 2008 law including aviation in the ETS to surrender carbon allowances to cover all their 2013 emissions for flights into, out of and within the EU.

Assuming the directive is finalized on time, the requirement to surrender allowances for 2013 emissions would be lifted. Airlines operating intercontinental flights would have to report the portion of their 2014 emissions covered by the new directive to administering authorities by March
30, 2015, and would have to surrender sufficient carbon allowances to cover the emissions by April 30, 2015.

In addition, “all emissions from flights between airports in the European Economic Area (covering the 28 EU member states plus Norway and Iceland) would continue to be covered,” the EU said. Most emission allowances are given to airlines for free, with additional allowances bought at government-run auctions or on the carbon market.

Hedegaard said the ICAO promise to adopt a market mechanism to reduce aviation emissions was a result of the original EU decision to include all flights in the ETS. “Who believes that ICAO would have agreed a global market-based mechanism without the pressure from the European Union?” she said.

Matthias Groote, chairman of the European Parliament’s Environment Committee, said in a statement that “the EU is free to legislate within its own airspace, and we are committed to include aviation emissions in the ETS.”

Before Europe suspended carbon curbs on foreign flights, President Barack Obama signed a bill shielding US carriers from the EU legislation. Russia announced it was considering limits on European flights over Siberia as part of possible retaliatory measures. Airbus SAS said in June that 27 orders from China for A330 wide-body jetliners are in limbo after the government there froze the contracts as part of a campaign against the EU plans.

India has since voiced firm opposition to the EU plans to impose a scaled-back carbon charge on flights over European airspace while a senior U.S. lawmaker said the new EU proposal runs afoul of the law intended to shield U.S. airlines from such charges.

India said the EU proposal defies the global aviation agreement. "What they (the European Commission) have now done is in total conflict with what the ICAO has decided. The multilateral body has to intervene in this matter," K.N. Shrivastava, India's aviation secretary, told reporters.

Along with China, India has defied the European Union move, even refusing to submit emissions data before the EU suspended it for a year amid threats of a trade war.

The EU proposal also could push the U.S. government to invoke the law that would shield U.S. airlines from what Transportation Secretary Anthony Foxx may deem an unfair charge. Republican Senator John Thune, who introduced the measure in the Senate, will raise the issue in a letter to Foxx and other U.S. officials, his office said. The law gives the secretary of transportation the authority to ensure that U.S. carriers are not penalized by unilateral EU emissions charges. "Senator Thune believes that any such effort by the European Commission would be in direct violation of the legislation that was signed into law last year to hold U.S. air carriers harmless from such unilateral actions," Thune spokesperson Andi Fouberg told reporters.

For the proposal to go into effect, it needs the approval of member states and the European Parliament.

19. Biofuels Reform on Ice as Mandate Denied

MEPs have refused to grant rapporteur Corinne Lepage (ALDE) a mandate to open negotiations with member states and the European Commission on proposed reform of the EU’s biofuels rules.
Proposals to restrict the use of first-generation, crop-based biofuels in Europe could now be on ice for some months.

Ms. Lepage needed 36 votes in favor of a mandate, but won only 34 in a European Parliament environment committee vote. The proposals must now go to a second reading, which is unlikely to happen until after a new parliament is elected in May, a spokesman for Ms. Lepage said.

Campaign group T&E said a final decision is unlikely until 2015. “This is an unfortunate case of vested interests winning out over innovators willing and able to produce more sustainable biofuels,” Nusa Urbančič of T&E said.

20. Italy's Urban Air Quality Worsening; Minister Calls for Stricter Enforcement

Italian Minister of Environment Andrea Orlando has called for better enforcement of existing laws aimed at improving air and water quality to address problems outlined in a report on the environmental health of urban areas released by the Institute for Environmental Protection and Research (ISPRA), the ministry's technical branch. The ninth edition of the “Urban Environmental Quality” report, issued on October 11th, said air quality in the 2010-12 period continued to deteriorate in Italy, with levels of coarse particles (PM-10), nitrogen dioxide and carbon monoxide on the rise, especially in the industrial north and center of the country along with the island of Sicily, and Campania, the region around Naples, where enforcement is reported to be weakest.

One bright spot was a reduction in vehicle traffic in six of the eight largest cities, though it rose in the two biggest—Rome and Milan. ISPRA said the four largest cities, including Turin and Naples as well as Rome and Milan, still had too much car traffic for their populations. Overall, though, urban traffic was lower in the 2010-2012 period covered by the report than in periods covered by the previous two editions of the report. ISPRA Director General Stefano Laporta said that trend, if continued, would yield positive results for air quality in urban areas in the medium term.

21. Serbia Has Transitioned to 10 PPM Sulfur Fuels

Since 2005, the PCFV has supported countries in Southeast Europe with the technical expertise, access to global and regional networks, and funding resources needed to adopt low sulfur diesel and petrol standards. Together with the Regional Environmental Center for Central and Eastern Europe (the REC), PCFV has now confirmed that Serbia has successfully transitioned to low sulfur 10 ppm fuels as of July 2013.

Serbia's considerable refinery investments over the past few years have now paid dividends in cleaner fuels which will be used nationally and also exported regionally, contributing to improved air quality for millions of people.

Serbia is now fully in line with EU requirements for lead, aromatics, benzene (for petrol) and sulfur (for both petrol and diesel). This latest development on fuel quality in the region is a product of regional cooperation through the Southeast European Regional Clean Fuels and Vehicles Network, supported by the PCFV with financing from the European Union, the USEPA and the FIA Foundation. Serbia’s pump-level fuel quality was confirmed with support from Ice Rikalovski of the Macedonian OKTA refinery, who designed the fuel quality sampling methodology used to independently confirm fuel quality in Serbia's achievement. Laboratory support was provided through the REC’s Regional Proficiency Testing Scheme with laboratories in the Western Balkans. A regional workshop to discuss wider sampling in the region will be organized in the first half of November 2013 in Belgrade.
22. Ireland’s Greenhouse Gas Emissions Rise Prompts Call for Higher Carbon Price

Ireland’s greenhouse gas emissions rose in 2013 for the first time in six years, mainly due to more use of coal in electricity generation, according to annual statistics released on October 9th by the Environmental Protection Agency. The 1 percent rise in emissions prompted the EPA—an independent body responsible for environmental protection and policing—to call for a higher carbon price to wean the economy from its reliance on fossil fuels.

The 2010 Budget and Finance Act introduced a carbon tax of 15 euros ($20.25) per metric ton of carbon dioxide, which was increased to 20 euros ($27) in 2012. In Budget 2013 it was announced that the carbon tax will be extended to solid fuels (for example, peat and coal) on a phased basis. A rate of 10 euros ($13.50) per metric ton will be applied with effect from May 1, 2013 and a rate of 20 euros per metric ton from May 1, 2014.

The Irish government is committed to introducing a climate change bill by the end of this year, although environmental activist groups and opposition parties, including the Green Party, have criticized the current draft bill for failing to include specific targets for emissions cuts.

The energy sector was the biggest contributor to the overall hike in emissions with a 5.9 percent rise from the previous year, reflecting an increase in the use of carbon-intensive fuels such as coal and peat, the EPA said. Emissions from agriculture—resulting from an increase in the number of cattle and sheep—rose 3 percent in 2012 while emissions from industry and commerce together rose 1.6 percent. Emissions fell in the residential sector, down 5.9 percent, and the transportation sector, down 3.5 percent.

Agriculture remained Ireland’s single largest contributor to overall emissions, at 32.1 percent of the total, followed by energy (primarily electricity generation) at 21.9 percent and transportation at 18.8 percent. The remaining bulk of emissions came from the combined sectors of industry and commerce at 14.7 percent, the residential sector at 10.7 percent, and waste at 1.8 percent.

Because emissions fell in the preceding five years, Ireland was able to meet its Kyoto Protocol obligations for the period 2008-12, the EPA said. But in the longer term, the 2012 hike in emissions reveals that “environmental pressures remain, and will increase, particularly as the economy starts to recover,” EPA Deputy Director General Dana Lynott said in a prepared statement. She said the figures point to the “urgent need for a higher carbon price which would provide an incentive for using less CO2 intensive energy sources, such as natural gas.”

NORTH AMERICA

23. U.S. Airlines Show Wide Gap in Fuel Efficiency: Study

U.S. airlines operating in the domestic market showed a wide gap in fuel efficiency, with Alaska Airlines taking the top ranking, according to a study by the International Council on Clear Transportation (ICCT). ICCT measured fuel efficiency of 15 U.S. airlines in 2010 and found a 26 percent difference between the most fuel-efficient and the least fuel-efficient airlines.

The study found that five of the country’s biggest airlines were among the least efficient - United, Virgin, Delta, US and American. In fact American ranked way down at number 14, just above last placed Allegiant Air (see chart below).
ICCT attributed the disparity to investments in technologies like winglets and “high bypass ratio engines,” as well as to “seating density, percent seat occupancy, and operational practices such as fuel loading and single-engine taxiing.”

Surprisingly, profitability and in-service fuel efficiency were not well correlated. The most profitable airline from 2009 to 2011 was Allegiant air, which ranked last in fuel efficiency.

The ICCT study is the first to quantify fuel performance of U.S. airlines.

24. CARB Details Low-NOX Engine Rule

California air board officials are detailing plans to adopt in December new, optional ultra low-nitrogen oxide (NOx) emission standards for diesel truck engines that truckers could achieve by accessing state incentive funding to purchase the cleaner engines, measures which may be necessary if EPA strengthens its ozone standard.

The board is also considering a future mandatory low-NOx engine standard, but is waiting on pending research to support such a rulemaking, the board says.

California Air Resources Board officials earlier this year said they wanted to develop incentives to encourage engine makers to develop motors that can meet an ultra-low NOx standard, which is more stringent than the current standard for 2010 and later engines. This new standard, as long as it remains optional, could be used to prioritize funding provided to truckers under state incentive programs, such as the Carl Moyer program administered by CARB, the board says. The Moyer program provides grants to upgrade equipment as long as emissions are reduced more than what is required by existing regulations.
CARB officials say a new stringent NOx standard, although optional at first, could help California meet increasingly tighter federal air quality standards. If EPA eventually tightens its federal ozone standard to as low as 60 parts per billion, which could put most of California out of attainment, it is possible that the optional low-NOx standard may become a statewide mandate according to CARB.

Engine manufacturers and other industry officials earlier this year said they have many questions for the board on how an optional NOx standard would work under board incentive funding programs like Moyer, especially because the funding program is set to expire next year. Manufacturers also said they need time to study the CARB proposal to see if it would be feasible.

CARB officials in March held a public workshop to kick-off discussions with stakeholders on possible development of the optional low-NOx standard for on-road heavy-duty engines. ARB says it wants to encourage engine makers to introduce new technologies to reduce NOx below the current mandatory diesel engine emission standards for model years 2010 and later.

The 2010 NOx engine standard is 0.2 grams per brake horsepower-hour. A CARB spokeswoman says that staff will bring the proposed optional NOx standards to the board for adoption at a December hearing. The December board item will only contain optional NOx standards that will open up incentive funding for the purchase of vehicles with engines meeting the optional standard, the spokeswoman says.

The proposed standards will be 0.01, 0.02, and 0.05 grams per brake horsepower-hour, she says. "The standards will be 90 percent, 75 percent, and 50 percent below the current standard of 0.2 [grams per brake horsepower-hour]."

Meanwhile, a study by the Southwest Research Institute is underway to support a future rulemaking to mandate the lower NOx emission standards for heavy-duty vehicles, the ARB spokeswoman says. But "it would be premature at this point to speculate on when we would return to the board and propose mandatory NOx standards," she said.

25. Governor Brown Will Sign Bills Extending Fees, Incentives to Reduce Emissions

Gov. Jerry Brown has announced that he will sign legislation extending a fee on vehicle registrations and tire sales in California to pay for programs designed to reduce emissions and promote alternative fuels. Assembly Bill 8, by Assemblyman Henry Perea, D-Fresno, will extend until 2024 a $3 increase in vehicle registration fees scheduled to expire in 2016.

Brown also said he will sign legislation providing money to the California Air Resources Board for programs to encourage the use of zero-emission and hybrid vehicles. Senate Bill 359, by Sen. Ellen Corbett, D-San Leandro, includes $20 million for rebates to Californians who purchase a plug-in hybrid electric vehicle or battery or fuel cell electric vehicle.

Brown has made climate change a focus of his administration but has tangled frequently with environmentalists. For example, according to a legislative analysis, the Sierra Club objected to a provision of the Perea bill that would repeal the California Air Resources Board's authority to require oil refiners to assure the public availability of hydrogen fueling stations once a certain number of vehicles are on the road. Instead, the bill will require the California Energy Commission to spend as much as $220 million over the next decade funding the development of hydrogen stations.
26. Truckers Support Air Board in Diesel Pollution Crackdown

As state air pollution officials step up inspections of diesel exhaust from big rigs, some of their best allies are truckers themselves. They are pushing the Air Resources Board to enforce pollution rules more aggressively for trucks in advance of a Jan. 1 deadline.

Truckers are also the No.1 tipsters, placing anonymous calls and sending emails to finger competitors they say are gaining an unfair advantage by not upgrading their engines or installing expensive filters that capture harmful diesel particulates before they are released into the air.

Diesel exhaust is the worst remaining pollution source on roadways. It contains smog-forming nitrogen oxides and fine particles — soot — that lodge deep in the lungs and are linked to lung and heart disease, asthma and cancer. Diesel soot was classified as a toxic air contaminant by the state in 1998.

Air quality officials say it accounts for 85% of Southern California's cancer risk from air pollution.

The regulations being phased in over the next decade are the nation's toughest and target the nearly 1 million diesel trucks that operate in the state.

By January 1, about 50,000 more heavy diesel trucks — including those of the smallest fleets, owner-operators and independent drivers that make up the bulk of the industry — will have to install diesel particulate filters or upgrade to newer, cleaner engines.

The industry says the rules are not being enforced strongly enough.

"Companies have invested millions of dollars only to be undercut by carriers that are choosing not to comply because they figure they won't get caught," said Michael Shaw, a spokesman for the California Trucking Assn. "Without additional investment in enforcement ... there's little chance the Air Resources Board is going to do more than scratch the surface."

The agency sends about 20 enforcement staffers a day to conduct field inspections of trucks around the state. They target truck fleets and major transportation corridors, including the Los Angeles and Long Beach ports, the Central Valley and the U.S.-Mexico border. Fines range from few hundred to thousands of dollars.
"Resources are limited, and for a lot of this we expect the deterrent effect," said Paul Jacobs, chief of diesel enforcement for the Air Resources Board. "We'll have an enforcement presence, but we're not going to get everyone."

Most trucks pass the inspections. In the first six months of 2013, the agency conducted 3,098 inspections for the diesel truck rules and issued 378 citations, for a compliance rate of 88%. That could dip once new requirements take effect.

"At the end of this year, there are going to be a lot of people clambering to try to get into compliance," said Matt Schrap, president of California Fleet Solutions, a company that helps trucking firms meet air quality regulations. "Some guys are probably just going to turn in the keys or keep operating until the ARB catches them."

California's rules, approved in 2008, faced stiff opposition from truckers and were relaxed two years later to give the industry more time to comply. But the rules put the state on track to slash emissions from diesel trucks 90% over the next decade and avoid 3,500 premature deaths, according to the Air Resources Board.

State officials estimate that trucking companies will pay $2.2 billion to comply with the rules through 2023. The industry says it is spending much more, about $1 billion a year, to replace trucks and install particulate filters, which can cost more than $10,000 per truck.

Environmental groups laud air quality officials for boosting the number of inspectors in recent years and helping truckers access grants and loans to upgrade their rigs. As the rules kick in, they hope to see air quality improve and rates of respiratory illness ease in neighborhoods near heavy truck traffic.

**27. Better Air Quality Linked to Longer Life Expectancy**

A new study led by Professor Arden Pope of Brigham Young University concludes that improvements in U.S. air quality since 1990 have sparked a 35 percent reduction in deaths and disability specifically attributable to air pollution. Pope was a member of a large research team who co-authored the study for the Journal of the American Medical Association.

“Some of the best news relative to the air pollution research over the last few years is the evidence that our reducing air pollution in the United States has resulted in measurable improvements in life expectancy and public health,” said Pope.

It’s no coincidence that 1990 is a point of reference in air quality research. In the late 80s, a steel mill in Utah Valley shut down for one year due to a labor strike. Pope spotted a research opportunity that found big problems caused by small particles floating in the air. Known as “particulate matter,” this kind of pollution is produced by combustion of car engines, power plants and steel mills.

Pope and other scholars found in successive studies that dirty air impacted hospital admissions, mortality rates, and cardiovascular disease – including the risk of heart attacks.

“One of the biggest surprises of this research was that air pollution contributed to cardiovascular disease and not just respiratory disease,” Pope said. “In fact, we’re learning that air pollution not only impacts our lungs but it impacts our heart and our brain.”
The research caught the attention of scientists and regulators, which led to automobile emissions standards and cleaner manufacturing processes.

28. High Court's Air Cases Are Most Significant Environmental Suits in 2013 Term

The Supreme Court is set to consider a range of environmental cases in its upcoming term that begins next month but a series of Clean Air Act cases, including reviews of the agency's cross-state air pollution rule (CSAPR), its greenhouse gas (GHG) program and industry's ability to defend against air law complaints, are the highest-profile environmental suits pending before the justices, court watchers say.

"The air cases are the 'whales' so far -- everyone is on pins and needles waiting to see whether they'll accept the GHG case," says one law professor tracking the petitions.

Among the air cases, the justices have already agreed to hear EPA v. EME Homer City Generation, et al., in which the justices will review CSAPR after the U.S. Court of Appeals for the District of Columbia Circuit struck it down for infringing on state authority.

The third high-profile air petition before the court deals with industry's ability to mount an "affirmative defense" against air act penalties for certain excess emissions. In Luminant Generation Co. LLC v. EPA, the utility is asking the justices to overturn a 5th Circuit ruling that upheld EPA's policy that said Texas may not exempt industry from fines for excess emissions during planned startup, shutdown and maintenance events, if sources provide an affirmative defense showing how the emissions were unavoidable.

Luminant argues in a September 10th reply brief that the case addresses a critical question of whether EPA can substitute its policy preferences for the judgment of states, saying the "panel decision presents a grave 'threat to cooperative federalism.'" -- a topic which observers have also cited as a key factor in the GHG and CSAPR petitions.

29. U.S. Justices to Hear Challenge to Obama on Climate Change

The U.S. Supreme Court has agreed to hear a challenge to part of the Obama administration's first wave of regulations aimed at tackling climate change, accepting its biggest environmental case in six years. The court said it would not review the underlying determination that greenhouse gases are a public health concern or a separate regulation that limits greenhouse gas emissions from motor vehicles. The single question the court will consider is whether the U.S. Environmental Protection Agency correctly determined that its decision to regulate motor vehicle emissions automatically gave it the authority to regulate emissions from stationary sources such as power plants and oil refineries.

Oral arguments are likely to be heard early in the New Year with a ruling issued by the end of June.

Gina McCarthy, the EPA administrator, said in a statement that the court was taking up a "very narrow legal question" that would not substantially weaken the Obama administration's climate-change agenda. EPA regulations are among President Barack Obama's most significant measures to address climate change.

A federal appeals court in Washington upheld the rules, issued by the EPA under the Clean Air Act, in 2012. The regulations allowed for greenhouse-gas (GHG) emissions from a wide range of
sources to be regulated for the first time. By agreeing to hear a consolidated challenge from states and business groups, the court could be getting set to limit the reach of its groundbreaking 2007 ruling, Massachusetts v. EPA, in which it held on a 5-4 vote that carbon was a pollutant that could potentially be regulated under the Clean Air Act.

The court rejected outright three of the nine petitions that sought Supreme Court review, including one filed by Virginia Attorney General Ken Cuccinelli, a Republican that questioned whether the EPA appropriately weighed climate change science. The legal question, crafted by the court itself from those raised in the six petitions it agreed to review, indicates the court does not plan to revisit the underlying reasoning behind Massachusetts v. EPA but will weigh whether the EPA went further than allowed under the act.

Environmental lawyers stressed that because the justices will assess only one of the many legal questions raised in the petitions, it will only have a limited impact on EPA's broader goal of reducing greenhouse gas emissions, the biggest contributor to climate change. The decision does not affect the agency's ability to require power plants to install the best available technology to reduce emissions. It could, though, impede the EPA's ability to require new or modified facilities, such as refineries or power plants, to obtain emissions permits. Come June, the EPA is due to propose a major rule that would limit the amount of greenhouse gases the country's existing fleet of more than 1,000 power plants can emit.

The question the justices will consider stems from EPA's 2010 determination that its regulation of GHGs from vehicles triggers a requirement to also regulate the emissions from new and modified stationary sources under the prevention of significant deterioration (PSD) program. As a result, the agency crafted a rule, known as the "tailoring" rule, that significantly raised statutory permitting thresholds to exempt small sources from permit requirements, as well as a "timing" rule that extended EPA's existing PSD requirements to GHGs and made those requirements effective on Jan. 2, 2011 – the same day that the vehicle rules took effect.

Critics of the rules argued in the D.C. Circuit challenge that that the tailoring rule was unlawful because EPA lacked authority to change statutory permit thresholds. And on the timing rule, they charged that EPA should have considered a more narrow definition of air act language requiring permitting of "any air pollutant" to exclude GHGs. But the appellate court upheld both rules. On the tailoring rule, the court held that industry groups lacked standing to challenge the agency's deregulatory action while it backed EPA's interpretation that PSD requirements extend to GHGs. "As EPA argues, 'it must give effect to the unambiguously expressed intent of Congress,' which here requires PSD coverage for major emitters of any regulated pollutant," the D.C. Circuit said.

While the court is not reviewing the tailoring rule directly, it appears likely to examine the "timing" rule.

30. EPA Confirms Tier 3 Delay

U.S. EPA has confirmed that it won't finalize a rule that would reduce sulfur in gasoline by year's end as originally promised but offered assurances that the delay wouldn't affect the rule's scheduled 2017 implementation.

Due to the more than 200,000 comments it received, the agency said in a statement it now intends to issue the Tier 3 gasoline standards in February. The rule, which was proposed last March, had been set to be finalized in December, which environmentalists said would allow it to take effect in 2017.
"EPA will make a decision with regard to the start date of the program in the final rule, but the agency's adjusted schedule does not preclude a 2017 start date for the program, as proposed," the agency said in a statement. EPA added that the standards "would provide critical air quality and health benefits as soon as they are implemented."

As proposed, the Tier 3 standards would lower the levels of sulfur in gasoline from 30 parts per million to 10 ppm by 2017, while slashing emissions of smog-forming pollutants and soot from vehicles. They would also align the federal government with fuel standards in California.

The rules have been beset by questions about their timeline. After a lengthy delay, the proposal was released March 29 but was not published in the Federal Register until May. Industry complaints about the short turnaround led to a two-week extension in the comment period, prompting concerns that the standards could slip past this year.

Automakers disagree, saying they already must comply with California's sulfur cuts as part of the Low-Emission Vehicle (LEV III) program that also begins in 2017. The industry has advocated for the national Tier 3 standards to align with California's to reduce regulatory confusion. They say they're prepared to meet them by 2017.

Meanwhile, the American Lung Association has launched a series of online videos that it says will show the broad public support for the proposed standards. The videos, which launched earlier this month on the group's YouTube page, feature man-on-the-street interviews with testimonials about why people are advocating for clean air.

The ads also feature those being interviewed dropping a penny in a jar to signify the extra penny per gallon the standards are expected to cost. Industry groups have said the standards will actually cost between 6 and 9 cents more per gallon.

31. US Judge Rejects Alaska Suit Against ECA

Alaska's legal challenge to its inclusion in the North American emissions control area (ECA) has been rejected by a US federal judge. Judge Sharon L. Gleason dismissed the case brought by the state of Alaska in July last year noting that accepting a judicial review of the case would demonstrate a "lack of respect" for authority for the US government's international arrangements. Alaska had named US Secretary of State, Hillary Rodham Clinton, as one of the defendants.

"Accordingly, judicial review of [Clinton's] decision to accept the North America ECA would demonstrate a lack of respect for both Congress's intent and Secretary of State's executive power," she said as quoted by the Alaska Dispatch.

The state filed its lawsuit in July 2012, a month before new rules went into effect requiring that cargo carriers and cruise ships use a low-sulfur fuel within 200 miles of U.S. and Canadian shores.

The state Department of Law said in a statement that it is considering an appeal. It said it remains concerned the rules "will increase the cost of shipping goods to and from Alaska and decrease state revenues by increasing the cost to export its natural resources."

Four environmental groups intervened on the side of the federal government, including the Center for Biological Diversity.
"The opinion is a breath of fresh air for all those who seek to protect the air quality that makes Alaska special. Unfortunately state officials seem to prioritize the interests of shipping companies over the health of Alaska residents and visitors," the center's senior counsel, Brendan Cummings, said in an email to the AP. "This court opinion is yet another rebuke to Alaska's misguided and consistently unsuccessful efforts to challenge seemingly every commonsense federal rulemaking that would protect Alaska's health and environment."

The rules were initiated by the U.S. and agreed to by dozens of other nations as part of an international treaty. They affect much of the North American coast and Hawaii, but state officials said they will have a disproportionate effect on Alaska.

The state, relying on industry estimates, said the rules could increase shipping costs to the state by 8 percent and cruise passenger costs up to $18 a day, potentially leading to a 15 percent decline in visitors.

The EPA has said it would work with vessel owners or operators who couldn't obtain the low-sulfur fuel. "The state remains hopeful that the Environmental Protection Agency will continue to work with shippers and cruise line companies to develop workable solutions that decrease the heavy burden the (rule) places on the state, private companies, and Alaskan citizens," the Department of Law's statement said.

With the new standards, set to become more stringent in 2015, emissions of nitrogen oxides, fine particulate matter and sulfur oxides are expected to drop by 2020 by 23 percent, 74 percent and 86 percent, respectively, below the levels predicted if the standards were not in effect, according to the EPA.

In April 2009, the U.S. and Canada jointly proposed amending MARPOL to include control areas off Alaska’s coast where sulfur emissions would be strictly regulated. The amendment was adopted and became part of MARPOL in March 2010. Clinton accepted the amendment for the U.S. on Aug. 1, 2011.

One year later, the Environmental Protection Agency and the U.S. Coast Guard started enforcing the low-sulfur fuel requirements in Alaska. As of Aug. 1, 2012, vessels in the areas were required to use fuel with sulfur content that didn't exceed 10,000 parts per million. Beginning in 2015, ships in the area will be required to use low-sulfur fuel, defined as having a sulfur content of less than 1,000 ppm. All ships operating within 200 miles of the coastlines will be required to use the costlier fuel.

According to the state’s complaint, Clinton failed to ensure the change was based on “relevant criteria,” and the EPA failed to provide a breakdown of emissions in control areas specific to
Alaska. Alaska “already enjoys air quality that is generally cleaner than the EPA’s National Ambient Air Quality Standards,” state officials wrote in a press release last year.

Extension of emissions control to Alaska requires approval by two-thirds of the U.S. Senate, the complaint said. The feds failed to acquire that approval, argues the state, and therefore enforcement in Alaska is unconstitutional. As for the two-thirds Senate vote requirement, Gleason ruled the treaty was self-executing, and MARPOL can be enforced without legislative action.

32. EPA, Carnival Agree To Emission Control Area Exemption

In a September 5th release, Carnival Corp. announced an agreement with U.S. and Canadian agencies to invest 180 million in emission-reduction technology on 32 of its Carnival Cruise Lines ships to comply with the joint-government Emission Control Area, or ECA, standards. Approved as an amendment to the U.N. treaty Marpol in 2010, ECA standards require ships operating within 200 miles of the U.S. or Canadian coasts to use fuel containing less than 0.1 percent sulfur by 2015. A 1 percent sulfur limit on fuel took effect in August 2012.

Under the agreement with the EPA the company will install scrubbers and diesel particulate filters on its ships to cut pollutants that can exacerbate smog or discharge microscopic particles dangerous to humans’ lungs. “We have developed a breakthrough solution for cleaner air that will set a new course in environmental protection for years to come,” Carnival Chief Executive Officer Arnold Donald said in a statement.

Regulators are seeking to reduce emissions from vessels, including cruise ships, that the EPA says are significant contributors to air pollution at ports. Standards developed by the U.S., Canadian and European governments imposed a 1 percent cap on sulfur in diesel used by ships in a 200-mile zone near the U.S. shore as of last year, and a 0.1 percent cap by 2015. The cruise industry complained that enough low-sulfur fuel might not be available by 2015, which could raise their costs.

Carnival, based in Miami, will scrub the emissions instead of using lower-sulfur fuel, with a deadline of mid-2016 to install the equipment on all 32 ships, which primarily serve North American markets. That will help the company head off higher fuel costs, the company said in its statement.

Carnival runs 102 ships under 10 different brands, including Princess, Holland America, Costa and Cunard, and said it would “explore the possibility” of adding the scrubber technology to other ships.

The 180 million cost to install the clean technology is about half the cost of running the ships on ultra low-sulfur fuel -- the originally prescribed method of ECA compliance -- over the next few years.

The control area was instituted as a way to improve air quality in U.S. and Canadian ports. EPA projects the tighter emissions standards will reduce sulfur emissions by 920,000 tons before 2020.

Alaska cruise industry representatives have said ECA standards would increase ship operating costs by up to $150 per passenger in their final implementation phase by 2015. The concern was that ECA would negatively impact the state’s cruise business because the Alaska-bound ships -- as well as freight transporters -- travel completely within the 200-mile limit.
In August 2012, Alaska shipping giant Totem Ocean Trailer Express Inc., or TOTE, began the process of converting its two 840-foot Orca-class vessels that service Anchorage from what's known as Bunker C fuel oil to liquefied natural gas as part of its own emissions exemption agreement with EPA.

33. U.S. Diesel Auto Sales Increase 41% in August 2013, Hybrid Sales Jump 38%

August was a robust month for passenger vehicle sales in the United States and diesel and hybrid cars were no exception, with diesels showing a 41.8 percent increase compared to August 2012 and hybrids experiencing a 38.1 percent increase, according to data compiled by Hybrid Cars.com and Baum and Associates.

The overall U.S. car market registered a 17.0 percent increase in August 2013 compared to August 2012.

For diesels, August’s 41.8 percent increase was preceded by a 38.1 percent in July 2013 over July 2012. It was the 32nd monthly increase in diesel car sales in the past 36 months, with 27 of those months registering double-digit increases.

This follows data compiled by R.L. Polk and Company for the Diesel Technology Forum earlier this year that showed clean diesel vehicle registrations in the U.S. had increased by more than 24 percent from 2010 through 2012, with hybrids increasing by 33 percent.

Allen Schaeffer, the Executive Director of the Diesel Technology Forum said with higher and fluctuating fuel prices, Americans are seeking more fuel efficient cars. In addition, he said the new federal fuel efficiency standards that will require a 54.5 mpg average by 2025 will also boost clean diesel auto sales, as diesel cars are 20 to 40 more fuel efficient than gasoline versions.

Schaeffer said the new data also showed that the combined hybrid, diesel, and plug in vehicle sales exceeded five percent of the total U.S. market in July – the first time alternative vehicles had broken the five percent barrier, according to Hybrid Cars.com.

While the clean diesel market share is 1.07 percent, the “take rate” – the percentage of people who choose diesels when they have the option between similar diesel and gasoline vehicles – is now an impressive 30 percent in the U.S., Schaeffer said.

34. Railroad Agrees To Clean Up Freight Yard Air Pollution

In response to complaints from neighbors, Norfolk Southern has agreed to take more aggressive steps to clean up lung-damaging diesel pollution from equipment at the railroad's Englewood freight yard. As part of a revised deal with Mayor Rahm Emanuel's administration, the Virginia-based railroad also confirmed it will donate an elevated track in the low-income, largely African-American neighborhood to be converted into a recreational trail similar to a project already underway on the North Side.

The announcement came at a meeting of the Chicago Plan Commission, which last month delayed expanding a pair of tax increment financing districts to include an 84-acre expansion of a Norfolk Southern freight yard south of Garfield Boulevard.

Commissioners unanimously approved the changes after the railroad agreed to immediately clean up a dozen forklifts at the yard. By 2018, Norfolk Southern also will upgrade engines or install
pollution controls on all but two of 38 diesel-powered machines that transfer freight containers between trains and trucks; the other two will be upgraded the next year.

Without the improvements, an analysis by the nonprofit Environmental Law and Policy Center estimated, the freight yard expansion would substantially increase pollution in a neighborhood already plagued by high rates of asthma. Using a computer model developed by the U.S. Environmental Protection Agency, the group found that worrisome levels of soot could spread several blocks beyond the site.

"This agreement will put Englewood on the map as a place where the community stood up, the city listened and the railroad came to the table to find a better way," said John Ellis, a longtime neighborhood resident who runs Providence House, an organization for low-income seniors.

For more than two years, Norfolk Southern has been buying and demolishing homes to make room for the freight yard. The project will extend an existing 140-acre rail and freight operation just north of the site that handles about 480,000 freight containers a year. The freight yard, known as an intermodal facility, is one of several on the South Side where large metal containers are transferred between trains and trucks. Norfolk Southern said its 10-year expansion project, to be built in phases, will create about 400 jobs and boast a regional economic impact of $1.6 billion by 2030.

### 35. Appeals Court Backs Fuel Plan of California Climate Law

California's pioneering efforts to combat global climate change got a big boost recently from a federal appeals court, which upheld a state program to reduce greenhouse gas emissions for transportation fuels. The Ninth U.S. Circuit Court of Appeals rejected the central argument by fuel producers and allies that California was violating a constitutional rule against impeding interstate commerce with its low-carbon fuel standard, laying the groundwork for a potential Supreme Court fight.

The standard requires reductions in carbon emissions for fuels, to be measured throughout the lifecycle - including production and transportation as well as ultimate use. Out-of-state fuel producers argue that it discriminates against their products, favoring California-produced fuels, which are not transported as far.

A federal judge in Fresno ruled last year that the low-carbon fuel standard (LCFS) was unconstitutional under the Commerce Clause for that reason. State air regulators appealed, and were backed by the appeals court. "We will not, at the outset, block California from developing this innovative, nondiscriminatory regulation to impede global warming," read the majority opinion in the two-to-one ruling. "The Commerce Clause does not protect Plaintiffs' ability to make others pay for the hidden harms of their products merely because those products are shipped across state lines," it said.

California regulators say the standard is a crucial component in its effort to roll back emissions to 1990 levels by 2020. Transportation accounts for about 40 percent of the state's output of heat-trapping gases.

The Ninth Circuit did not state an opinion as to whether California's regulations are preempted by federal law, and sent the case back to the Fresno federal court for more litigation on a variety of legal issues.
The state was granted a stay on the now-vacated injunction, allowing it to continue implementing the LCFS program.

36. Lawmaker Says Action by EPA on Biofuels Could Head Off Legislation

As the United States gets closer to being unable to meet federal biofuel targets, a regulatory adjustment would lessen the need for legislation to change the nation's renewable fuel policy, said Representative John Shimkus, a Republican from Illinois and head of a House Energy and Commerce subcommittee. He said the timing and substance of the Environmental Protection Agency's 2014 biofuel proposal could make legislative reform of the Renewable Fuel Standard moot.

Shimkus said he expects a decision on whether legislation will be introduced to be reached by the year-end.

"If they were more realistic with the numbers, they could be really helpful," Shimkus told reporters at a Platts Energy Podium.

Shimkus is one of four Republicans designated by committee chairman Fred Upton to lead a push for possible legislative fixes for the biofuel mandate, which is unpopular with oil refiners and many legislators from oil-producing states. The mandate was created by a 2005 comprehensive energy bill aimed at reducing the nation's oil dependence.

The issue has split lawmakers mostly along regional lines, with lawmakers from oil producing states backing repeal and those from corn growing regions reluctant to change the law. Given that, lawmakers on the House panel have said there is not enough support to completely overturn the law.

The White House's Office of Management and Budget (OMB) is reviewing the agency's proposal for how much ethanol and other biofuels will need to be blended into the U.S. gasoline and diesel supplies in 2014. Next year's targets are due to be proposed this month and finalized in December. That timeline could slip, however, depending on the how long the OMB takes to review the proposal. The EPA has signaled it will propose cuts to 2014 requirements set by the federal law, in particular to address shortfalls in the production of advanced biofuels.

Last updated in 2007, the mandate requires increasing amounts of biofuels to be blended into U.S. gasoline and diesel supplies each year through 2022. Tepid gasoline demand has placed the nation on the verge of hitting the so-called blend wall, the point at which the law will require the use of more ethanol than can be blended into gasoline supplies at the 10 percent per gallon level that now dominates U.S. fueling infrastructure.

Biofuel backers have argued that the EPA has the authority to lower the federal targets to address these concerns and that no legislative action is needed. Oil industry groups have called for a complete repeal of the law.

Recently, however, Jack Gerard, chief executive of the oil and gas lobbyists the American Petroleum Institute, said he believes lawmakers will act to lower biofuel use targets and added that API would weigh support for any pathway to reform. The comments may signal a greater openness on the part of the API to try to reform the law, rather than scrap it entirely.
Gerard did not specify what legislative proposals the group might put forward. A waiver request the group has already made would cap 2014 targets at 9.7 percent of the government's projected U.S. gasoline demand for the year.

Gerard said he hopes the 2014 proposal will be released to the public within the next 30 days to help avoid the months-long delays that plagued the renewable fuel program for 2013.

The approaching blend wall has roiled the market for biofuel credits that refiners use to comply with the mandate. Prices of the credits, known as RINs, spiked from a few cents in January to almost $1.50 in July. The credits were trading between 51 and 53 cents recently. Senate Agriculture Committee Chairwoman Debbie Stabenow has asked the Commodity Futures Trading Commission to investigate whether any market manipulation was behind the spike in RIN prices this year.

37. Shell to Pay $1.1 Million in Fines for Arctic Air-Quality Violations

Shell has agreed to pay $1.1 million for air-quality violations from the vessels it used to drill two oil-exploration wells in Arctic waters off Alaska last year, federal regulators said. Shell will pay the civil fines for Clean Air Act violations that were discovered during inspections of the Discoverer and Kulluk drillships, which operated in the Chukchi and Beaufort seas, the Environmental Protection Agency said.

The breaches of air-quality permits that Shell needed to operate in the icy waters were among several mishaps for the oil giant as it sought to explore in the remote but potentially petroleum-rich Arctic outer continental shelf. First, equipment problems delayed the start of its drill season. Instead of the five wells it had planned to complete in 2012, Shell could do only preliminary drilling on two wells, a limit placed by regulators because of equipment failures on a required oil-spill vessel. The Discoverer, contracted from Noble Corp, was detained for safety and environmental problems.

It all culminated with the grounding of the Kulluk during a December storm near Kodiak Island. Federal investigations were launched into the grounding and the Discoverer's shortcomings, and the Department of Interior now plans to issue new rules for Arctic drilling by the end of the year.

The violations resolved by Shell's settlement include excessive hourly nitrogen-oxide emissions on the drillships and support vessels and lapses in use of emissions-cleansing equipment.

The agreement requires Shell to pay $710,000 for 23 violations that inspectors said occurred on the Discoverer and its support fleet and $390,000 for 11 violations on the Kulluk. While Shell will pay fines for excessive hourly air pollution, the drilling operations produced only a tiny fraction of the total air pollution Shell would have been allowed to emit during a full year, according to the settlement agreement.

Shell has spent about $5 billion on its Alaska offshore program, including $2.1 billion in a 2008 Chukchi lease sale.

38. Canada's Railways Extend Voluntary Accord to Reduce Pollutants, GHGs

The Canadian government has renewed a voluntary agreement with the country's railways on reducing air pollutant and greenhouse gases emissions from locomotives. A new memorandum of understanding for the 2011-2015 period continues the progress made during two previous five-
year agreements with the railways and will help Canada move toward its target under the Copenhagen Accord of a 17 percent reduction in greenhouse gas emissions from 2005 levels by 2020, Transport Minister Lisa Raitt said in a September 16th statement.

The new agreement sets 2015 targets to reduce locomotive emissions by 6 percent from 2010 levels for Class 1 freight services and intercity passenger services and 3 percent from 2010 levels for short line railways. The Canadian Transportation Act defines short line railways as those that “feed into and take away from” high-volume, trunk-line railways. The agreement took effect on September 16th and expires on December 31, 2016.

Railways covered by the voluntary agreement’s provisions include Amtrak (National Railroad Passenger Corp.), Canadian Pacific, Canadian National Railway Co. and VIA Rail Canada Inc.

Measures, Targets, Actions

The renewed memorandum sets greenhouse gas emissions targets of 15.45 kilograms of carbon dioxide-equivalent per 1,000 revenue ton kilometers for Class 1 freight services, 14.75 kilograms of carbon dioxide-equivalent per 1,000 revenue ton kilometers for short line railways, and 0.11 kilograms of carbon dioxide-equivalent per passenger-kilometer for intercity passenger rail services. A revenue ton kilometer refers to the transport of a metric ton of goods for one kilometer.

Emission targets will be measured against 2010 industry levels, as reported annually under the Locomotive Emissions Monitoring Program, a joint initiative of the railway association, Environment Canada, and Transport Canada. The new memorandum does not set targets for commuter railways, as was done under the previous agreements, but those railways' environmental performance and efforts to reduce greenhouse gas emissions will continue to be reported on an annual basis.

The memorandum also calls for continued efforts by Canadian railways to reduce their emissions of criteria air contaminants such as particulate matter, carbon monoxide, hydrocarbons, sulfur dioxide and nitrogen oxides, noting that those emissions have been decreasing under the previous voluntary agreements.

The memorandum does not specify targets for reducing criteria air contaminants, noting that Transport Canada is currently developing emissions regulations for federally regulated railway companies under the Railway Safety Act that will be aligned with regulations in the United States. Until those regulations are in place, the Railway Association of Canada (RAC) is encouraging its members to continue to comply with U.S. emissions standards.

The memorandum calls for independent, third-party auditing of the memorandum's processes and supporting documentation at least once during the course of the agreement, and establishes a Technical Review Committee to provide oversight for reporting and verification activities. The committee includes representatives of the association, Environment Canada, Transport Canada, Canadian National, Canadian Pacific, VIA Rail, Metrolinx and an environmental organization.

The 2010 report on the Locomotive Emissions Monitoring Program concluded that Canada's railways in 2010 met or exceeded all but one of the emissions targets in the 2006-2010 agreement (targets in parentheses): Class 1 freight had 16.43 kilograms of carbon dioxide-equivalent emissions per 1,000 revenue ton kilometers (16.98); regional short lines had 15.21 kilograms of carbon dioxide-equivalent per 1,000 revenue ton kilometers (15.38); and intercity passenger services had 0.12 kilograms of carbon dioxide-equivalent per passenger-kilometer (0.12).
The lone sector that failed to meet its emissions target was commuter rail, which in 2010 reported an average 2.06 kilograms of carbon dioxide-equivalent per passenger, significantly higher than the target level of 1.46 kilograms per passenger. Increasing commuter rail emissions were the result of initiatives to maintain and increase ridership, the report said. “However, these initiatives have allowed the commuter rail sector to get more commuters out of their cars and off the highways, reducing both traffic congestion and automotive emissions,” it said.

Canadian railways met their obligations under the 2006-2010 memorandum to reduce their emissions of criteria air contaminants, primarily through acquisition of locomotives that met up-to-date U.S. Environmental Protection Agency standards and retirement of medium-horsepower locomotives built between 1973 and 1999.

According to Transport Canada, the Canadian railway sector accounted for about 4 percent of total Canadian transportation greenhouse gas emissions in 2010 and transported about 71 percent of total Canadian surface freight.

39. New England Governors, Canadian Premiers Pledge to Cooperate on Clean Energy

The governors of the six New England states and their counterparts from five Canadian Provinces passed a series of resolutions during their annual meeting in which they pledged to work together on clean energy approaches such as hydropower, greater use of energy-efficient vehicles, mitigating climate change and transportation proposals.

During their two-day meeting September 8-9 in La Malbaie, Quebec, Canada, the members of the Conference of New England Governors and Eastern Canadian Premiers (NEG/ECP) participated in roundtable discussions and private meetings focusing on how they could work more efficiently on a regional basis.

Among the resolutions adopted during the meeting (NEG-ECP 37-2) calls on the states and provinces to support increased use of alternative fuel vehicles and networks within the region. It specifically requires the organization to work with appropriate organizations in the area to compile an inventory of regional initiatives regarding electric and natural-gas-powered vehicles and to propose actions aimed at facilitating the interoperability of electric vehicle (EV) charging and alternative fueling stations, as well as identifying road corridors where this type of infrastructure could be established.

Among the developments discussed in connection with this effort is the 138-mile Vermont-Quebec EV Charging Corridor which was formally launched earlier this year by Vermont Gov. Peter Shumlin (D) and Quebec Premier Pauline Marios.

Also approved by members was a resolution (NEG-ECP 37-3) calling on the group’s Transportation and Air Quality Committee to work to achieve a 5 percent alternative fuel fleet market share in the region by 2020 and to maintain a regional network of expertise on sustainable transportation, greenhouse gas emissions and air quality. The resolution also calls for the committee to develop a regional profile of the fleet fuel efficiency and greenhouse gas emissions of light duty vehicles as well as the number of plug-in hybrids; battery and natural gas vehicles in the states and provinces.

Also adopted was a resolution (NEG-ECP 37-4) that reaffirms current GHG reduction goals adopted previously by the NEG/ECP and calls for the development of a work plan to be presented at the organization’s annual meeting in two years updating the progress in meeting those goals.
The New England states are Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. The five participating provinces are Quebec, New Brunswick, Newfoundland & Labrador, Nova Scotia and Prince Edward Island.

40. D.C. Circuit Rejects as Moot Truck Makers' Suit over EPA Air Rule Waivers

The U.S. Court of Appeals for the District of Columbia Circuit has rejected as moot a lawsuit from heavy-duty truck and engine manufacturers challenging emissions rule compliance waivers EPA gave to a competitor, saying there was no way the court could redress the manufacturers' alleged economic injury.

Truck manufacturers had been urging the court to scrap the EPA engine waivers because they "tilted the playing field" by allowing competitor Navistar to sell engines in 2012 that did not comply with nitrogen oxides (NOx) limits. Scrapping the waivers, they said, would allow them to seek Clean Air Act penalties against Navistar to end its alleged competitive advantage from using the waivers, which EPA issued under an interim rulemaking.

But Judge Karen Henderson, writing the unanimous opinion in Daimler Trucks North America LLC et al. v. EPA et al., found the manufacturers were "unable to demonstrate 'a more-than speculative chance' of obtaining redress" through scrapping the waivers, and the case is therefore moot. While the ruling for now appears to end a legal fight over the interim rule and its associated waivers, the court will soon hear arguments over a related EPA final rule also addressing the waiver issue.

EPA first issued the waivers to Navistar under the interim rulemaking with a fine of up to $1,191 per non-compliant engine, but truck manufacturers last year successfully challenged that rule in Mack Trucks Inc. v. EPA. The D.C. Circuit in a June 12, 2012, unanimous decision scrapped the interim rule after finding EPA had failed to show "good cause" for not following the typical rulemaking procedures. EPA in a final rule last September then raised the fine to up to $3,775 per non-compliant engine.

Despite the win in Mack Trucks, the manufacturers came back to court in Daimler after EPA decided the waivers issued via the vacated interim final rule remained valid. If the court in Daimler agreed to scrap the waivers, the manufacturers said it would allow them or EPA to pursue penalties under the Clean Air Act, which they said could help eliminate the competitive advantage Navistar gained through the interim final rule.

Daimler Trucks and other truck manufacturers say that while they pursued an expensive NOx control technology called selective catalytic reduction to meet an EPA NOx limit of 0.2 grams per horsepower-hour that came into effect in 2010, Navistar tried developing a recirculating exhaust gas approach that ultimately proved unsuccessful.

Though Navistar was initially able to rely on "banked" NOx credits it eventually told EPA in late 2011 it needed a waiver or else it would face a freeze on production. EPA acted quickly to provide the waiver through a dual-track rulemaking of an interim final rule that took effect immediately and proposed another rule under typical notice-and-comment procedures.

Truck manufacturers had hoped to use Daimler to scrap the waivers issued under the defunct interim rule, but Judge Henderson's opinion says that with the waivers expired, they can no longer injure the manufacturers.
Further, she says the companies' arguments about how they or EPA could pursue penalties against Navistar to eliminate its competitive gain "fails to persuade us." The reason, she says, is that EPA in briefing and oral arguments told the court it was highly unlikely to pursue enforcement action, given that Navistar had "relied in good faith" on the interim final rule waivers, and it was EPA's failure to follow its own rulemaking procedures that resulted in the interim final rule being scrapped.

Henderson says that with EPA enforcement action unlikely and the difficulties of pursuing penalties through a citizen suit given Navistar's good faith reliance on the waivers, "the prospect of redress for any past violation is remote and speculative."

Though the opinion marks a possible end to the legal battle over the interim final rule and its associated waivers, the legal battle over EPA's final rule that raised the waiver cost to up to $3,775 per engine continues through a suit also called Daimler Trucks North America LLC et al. v. EPA et al. That case is scheduled to be heard at oral arguments in the D.C. Circuit on October 22nd.

41. Eight U.S. States Band Together To Promote Clean Cars

The governors of California, New York and six other states have agreed to put 3.3 million zero-emission vehicles on the road within 12 years, which they said will help the environment and boost the economy.

The states will start by harmonizing building codes to make it easier to construct electric car charging stations and will consider financial incentives to promote zero-emission vehicles, according to the agreement, which was announced in Sacramento. They'll also consider giving favorable electricity rates for home charging systems, purchase clean cars for government fleets, and develop common standards for roadway signs and charging networks, according to the agreement.

Zero-emission vehicles include battery-electric vehicles, plug-in hybrid-electric vehicles and hydrogen fuel-cell electric vehicles. There are currently about 165,000 of those vehicles on U.S. roadways, with about 50,000 of those vehicles located in California, which requires automakers to produce a certain percentage of zero-emission vehicles as part of their overall fleet or buy credits from manufacturers who have produced more.

The governors said ramping up the number of clean cars will provide a major foothold in the battle to reduce heat-trapping greenhouse gas emissions from entering the atmosphere.

The rise of electric vehicles will also save drivers on fuel costs over time, they said. Electricity is the most widely available source of power and typically costs about two-thirds less than gasoline on a per-mile basis. By 2025, the average zero-emission vehicle driver will save nearly $6,000 in fueling costs over the life of the car, they said.

The governors of Connecticut, Maryland, Massachusetts, Oregon, Rhode Island and Vermont also signed the agreement.

42. U.S. Energy-Related Carbon Pollution At Lowest Since 1994

Carbon dioxide emissions from energy production in the United States fell to 5.29 billion metric tons in 2012 - its lowest level since 1994 - despite a growing economy and rising population,
The Energy Information Administration, the statistics arm of the Department of Energy, said there was a 3.8 percent drop from the previous year. That marked the largest decline in a non-recession year since EIA started tracking the data.

The latest decline came amid a large drop in energy intensity, the amount of energy consumed relative to GDP.

Energy consumption fell 2.4 percent in 2012 from 2011 while GDP rose 2.8 percent.

In addition to reduced energy intensity, carbon dioxide emissions reflected lower residential sector demand for heating after a warmer-than-usual winter in 2012.

43. Canada Says Falling Short Of Emissions Reduction Target

Canada has acknowledged that it will miss its target for greenhouse gas emissions by a wider margin than expected unless it takes further action to offset emissions in the oil industry. The admission in a report by the environment ministry comes as the Conservative Prime Minister Stephen Harper is actively pushing development of the Keystone XL pipeline, which critics say will encourage production in the Alberta oil sands, a top emitter.

Canada signed the Copenhagen Accord in December 2009 and committed to reduce its greenhouse gas emissions to 17 percent below 2005 levels by 2020. It estimates the country will produce 734 megatonnes (MT) of greenhouse gases in 2020, or 122 MT higher than its promised target. The new numbers are higher than the government's forecasts one year ago when it expected emissions to be at 720 MT in 2020.

"The projections indicate that further efforts will be required in order to meet the Copenhagen target," the report said.

"There has been an average annual decline in Canadian emissions intensity (emissions per unit of GDP) of approximately 1.5 percent since 1990, a trend that is projected to continue through 2020," the report said. "However, given that a strong connection still remains between economic growth and GHG emissions, absolute emissions are projected to rise over the period, although at a lower rate than economic growth."

The report, “Emissions Trends,” is based on Canada's 2013 National Inventory Report to the U.N. Framework Convention on Climate Change (UNFCCC), which gives estimates through 2011 for Canadian emissions of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluorides, converted into carbon dioxide-equivalents. It does not include black carbon emissions, which are not reported through the UNFCCC.

Environment Canada said the projections in the latest report show significant progress by consumers, businesses and governments since 2005, as 2020 emissions are projected at 128 million metric tons below the amount that there would have been without any action since 2005. But it also said the latest projections show that “further efforts will be required” to meet the Copenhagen target.

The estimates are based on emissions data from 2011 and existing regulations.

Environment Minister Leona Aglukkaq said the report showed significant progress since 2005 and that emissions would have been 128 MT higher by 2020 if no action had been taken.
"Our government is taking action to address climate change. We introduced world-leading coal power regulations and harmonized with the United States on vehicle emissions regulations - and we are getting results," she said.

The government has delayed plans to bring in regulations for the burgeoning oil and gas sector. Environment Canada projected in the report that greenhouse gas emissions from the oil and gas sector will increase to 200 million metric tons in 2020, up from 162 million in 2005.

Between 2005 and 2020, emissions from upstream oil and gas production are projected to increase from 109 million metric tons to 144 million, largely driven by increased bitumen production from oil sands whose emissions are projected to increase from 21 million metric tons to 76 million, the department said.

In the same time period, emissions from conventional oil production are projected to decrease from 32 million metric tons to 31 million, emissions from oil and natural gas transmission to fall from 16 million metric tons to 9 million, and emissions from downstream oil and gas production to fall from 24 million metric tons to 19 million, it said.

The report projects the following emissions changes for other sectors in 2020 compared to 2005:

- electricity generation, down 39 million metric tons, to 82 million;
- buildings, up 11 million metric tons, to 95 million;
- transportation, up 8 million metric tons, to 176 million;
- emissions-intensive and trade-exposed industries (metal and nonmetal mining, smelting and refining; and production and processing of industrial goods including chemicals, fertilizers, paper, and cement), up 3 million metric tons, to 90 million;
- agriculture, up 2 million metric tons, to 69 million; and
- waste and other sectors, up 1 million metric tons, to 50 million.

Land use and forestry policies are expected to represent a net decrease of 28 million metric tons in 2020.

44. High Levels of Carcinogens Found Downwind of Alberta Oil Sands Region

Contaminant levels higher than those of the world’s most polluted cities have been found downwind of Canada’s largest oil, gas and oil sands processing zone, in a rural area where men experience elevated rates of cancers linked to such chemicals, according to a study released on October 22nd by University of California, Irvine and University of Michigan scientists. The study, “Air Quality in the Industrial Heartland of Alberta, Canada and Potential Impacts on Human Health,” reported findings of high levels of the carcinogens 1,3-butadiene and benzene and other airborne pollutants.

“We're seeing elevated levels of carcinogens and other gases in the same area where we're seeing excess cancers known to be caused by these chemicals,” UC Irvine chemist Isobel Simpson said in an October 22 news release.

The study was published in the Atmospheric Environment journal.

The researchers captured emissions in the rural Fort Saskatchewan area of Alberta downwind from major refineries, chemical plants and oil sands processors, the release said. While the
scientists stopped short of saying documented pollutants were definitely causing the male
cancers, they recommended industrial emissions be decreased to protect workers and residents.

Alberta Environment spokeswoman Nikki Booth told the press that provincial monitoring is done
in the areas where the study would have taken its numbers. She said benzene levels exceeded
the province's ambient air-quality standard once between January 2012 and August 2013 and not
at all in 2011. "We aren't seeing the numbers that indicate people are being exposed to the level
of chemicals in this paper," Booth said.

45. GM To Sell Car Next Year Powered By Gasoline or Natural Gas

General Motors will begin selling a mid-sized sedan next summer that can be powered by either
gasoline or compressed natural gas, the U.S. automaker's chief executive has announced. The
2015 Chevrolet Impala, GM's first car powered by natural gas, will feature a powertrain that
switches from compressed natural gas to gasoline seamlessly and has a total driving range of up
to 500 miles, Dan Ackerson said in a speech.

The car, which will have one fuel tank for compressed natural gas and a second one for gasoline,
will be sold to both retail and fleet customers.

Natural gas is a cleaner-burning, less costly fuel than gasoline, and vehicles powered by
compressed natural gas typically emit 20 percent less greenhouse gases than gas-powered cars,
GM said, citing the California Air Resources Board.

New techniques unlocking vast reserves of natural gas from shale have produced a boom in U.S.
supplies and driven down prices, increasing interest in the fuel.

The numbers of CNG vehicles remain small. According to the industry group Natural Gas Vehicles
for America, about 130,000 to 135,000 natural gas vehicles operate in the United States and more
than 16 million globally, most of them commercial and fleet vehicles such as buses and garbage
trucks.

The number of natural gas filling stations totals about 1,350 in the United States, about half of
which are open to the public. That compares with about 168,000 retail gasoline stations, Ackerson
said.

GM previously said that next year it would begin selling bi-fuel versions of its heavy-duty Chevy
Silverado and GMC Sierra pickup trucks and natural gas versions of its Chevy Express and GMC
Savana passenger vans.

Honda Motor Co sells a CNG-powered Civic. Ford Motor Co prepares its trucks and vans so that
specialty companies can convert them to run on compressed natural gas, including its top-selling
F-Series pickup truck, starting in November.

The bi-fuel Impala is meant to address range anxiety associated with vehicles that operate on
natural gas only, much like GM's Chevy Volt plug-in hybrid car was designed to do for electric
cars, Ackerson said. It will carry a factory warranty on the powertrain and fuel system.

Citing the lack of CNG gas stations, Ackerson said the volumes for the bi-fuel Impala will initially
be small with most sales to commercial and government fleets. He said selling 750 to 1,000 of
the cars in the first model year would be "a home run."
46. Kia Plans To Offer Soul Electric Car In U.S. Next Year

Kia Motors Corp plans to sell an electric version of its second-generation Soul compact car in the United States next year, the Korean automaker’s U.S. unit has announced. It will start selling the Soul EV in 2014 in a handful of U.S. markets. But before then, Kia will start selling an updated version of a gas-powered Soul this month.

The Soul EV marks Kia’s first all-electric model aimed at the U.S. market, where electric car sales have fallen short of automakers’ previous estimates, but are still rising. The company shared few other details about the Soul EV, saying more information would be released at an upcoming U.S. auto show.

The Soul EV adds a second "green" car to Kia’s U.S. lineup after the hybrid version of the Optima sedan that it began offering in 2011.

During the first nine months of 2013, the Soul was Kia’s No. 2 best-selling model after the Optima. Soul sales have dropped 3 percent during that time, better than the 4.3 percent decline for Kia overall, but still short of the roughly 8 percent rise for the overall U.S. auto market.

47. US EPA Says Nothing Final on Ethanol Blend

The Environmental Protection Agency has sought to calm a furor over its apparent proposal to reduce ethanol use in gasoline next year, saying that no final decisions had been made about the contentious mandate. Reuters and other news outlets had reported on EPA documents that showed the agency proposing an unexpected drop in the amount of corn-based ethanol that would be required for blending next year, a historic retreat from the 2007 biofuel law and a major victory for the oil industry.

"At this point, EPA is only developing a draft proposal," EPA Administrator Gina McCarthy said in a statement in the agency's first public response to the reports. She said the Obama administration remained "firmly committed" to developing biofuels as a part of the plan to reduce U.S. dependence on imported oil.

Coming after months of an intensifying lobbying and political battle between oil refiners and ethanol groups, the reports were met with immediate skepticism from many in the biofuel industry, some questioning the documents' authenticity.

The EPA statement made no specific mention of the draft documents, but acknowledged some of the challenges in increasing use of biofuel. Under the reported proposal, the EPA appears to back the oil industry argument that it is not feasible to inject more than 10 percent ethanol into gasoline at the moment due to concerns over engine damage and liability.

"No decisions will be made on the final standards without a full opportunity for all stakeholders to comment on the EPA’s proposed 2014 renewable fuel standards and be heard on how to best foster a growing biofuels industry that takes into account infrastructure- and market-related factors," McCarthy said.

48. API to EPA: Expect Suit If 2014 Renewable Fuel Quotas Are Late
The American Petroleum Institute notified the US Environmental Protection Agency that it might sue if the federal environmental regulator fails to issue biomass-based diesel and renewable fuel requirements for 2014 on time. The federal Clean Air Act requires EPA set biomass-based diesel quotas no later than 14 months before the requirement would apply, Harry M. Ng, API’s vice-president and general counsel, said in a letter to EPA Administrator Gina McCarthy. The statutory deadline for EPA to set that deadline for 2014 was Nov. 1, 2012, he noted.

The CAA also mandates EPA set renewable fuel standards for the following year no later than November 30th, Ng continued. “EPA has not yet issued a notice of proposed rulemaking for the 2014 RFS, and API therefore anticipates that EPA will not issue the final 2014 RFS in advance of the Nov. 30, 2013, statutory deadline,” he said.

The agency has repeatedly been late issuing such standards, Ng said. “Obligated parties need this information ahead of the compliance year—as the CAA clearly requires EPA to do—to make operational, logistics, and investment decisions,” he noted.

“Furthermore, the uncertainties created by the ethanol blendwall are enormous, and EPA is only adding to the uncertainty with retroactive rules,” Ng continued. “EPA needs to move as quickly as possible to issue a final 2014 RFS.” He said API would consider its legal options, including suing in US District Court, after 60 days.

49. Eastern States Fear Ship Air Rule Delay Would Hinder Ozone Reduction Plans

Eastern state air regulators are ramping up concerns that their long-running efforts to curb ozone-forming emissions in order to meet EPA's ozone ambient air standard could be undermined if the International Maritime Organization (IMO) that includes the United States agrees to delay by five years a global deal to cut ships' air pollution.

At a September 12 meeting in Washington, D.C., representatives of 12 Mid-Atlantic and Northeastern states that make up the Ozone Transport Commission (OTC) said that they are relying on cuts in ships' emissions of the ozone precursor nitrogen oxides (NOx) as a key tool in their strategies for complying with EPA's ozone limit. The Clean Air Act largely preempts states regulating mobile sources such as ships, putting the onus on EPA to craft such rules.

Chris Salmi, a regulator with New Jersey's Department of Environmental Protection and chair of OTC's mobile source committee, said at the meeting that a five-year delay in the IMO agreement requiring ships to limit their NOx emissions in coastal waters would endanger "huge benefits" that would otherwise flow from the pact.

Russia and other members are urging IMO to amend and delay the mandate that ships within emissions controls areas (ECAs) -- coastal areas for which individual countries decide the scope -- use "Tier III" pollution controls from 2016 through 2021 to reduce NOx emissions, requiring the installation of selective catalytic reduction (SCR) technology. Countries seeking a delay say sufficient equipment will not be available in time to meet the mandate.

An IMO panel voted at a May meeting in London in favor of the delay, but it must be ratified by a more senior IMO panel in March, and OTC members are concerned about pollution spikes if the delay succeeds.

The delay would not stall the SCR mandates for U.S.-flagged ships because EPA has already issued domestic Clean Air Act rules to implement the ECA, but it would mean that SCR mandates
for foreign-flagged vessels would be delayed. As a result, anticipated NOx cuts from foreignflagged vessels -- which make up the vast majority of ocean-going vessels that enter U.S. ports -- could be delayed five years, exacerbating the ozone problem.

"It is our understanding that EPA and the Coast Guard do not support that delay," Salmi told the OTC meeting. He said that the ECA as planned could cut ozone levels in the United States by two parts per billion (ppb), a significant cut that would help states in attaining EPA's ozone limit. "We don't want to see that eroded," he said.

An EPA spokeswoman has previously said the agency will implement the ECA as planned, telling the press in May that it will work with the Coast Guard and the State Department on "next steps. The [IMO] amendment is not yet in effect. EPA remains strongly committed to ensuring the important health and environmental benefits for the United States will be achieved through the Tier III NOx standards in the North American ECA."

The possibility of an IMO delay and EPA only regulating U.S.-flagged vessels prompted Friends of the Earth in July to petition the agency to craft rules imposing Tier III mandates on foreignflagged ships in 2016. "[U]nilateral action by the EPA on this matter is imperative to protect public health and the environment. While U.S.-flagged vessels are subject to domestic regulations in 2016, foreign-flagged vessels -- which are far more numerous in U.S. waters and ports -- are not covered," says the July 16 petition. The group calls waiting for IMO to act "unwise and unsound."

Meanwhile, EPA has reached a tentative agreement with cruise line Carnival for the company on meeting a separate ECA mandate to use low-sulfur fuel in order to reduce sulfur dioxide (SO2) emissions. The deal will allow Carnival to use emissions controls on its ships instead of the more expensive low-sulfur fuel. The move should resolve a dispute between the agency and the company, which already resulted in Carnival pulling a cruise ship from its regular port of Baltimore in protest over having to meet the higher fuel costs. Under the agreement, Carnival's ships will use a combination of SO2 emission control "scrubbers" and diesel particulate filters to reduce air emissions, in lieu of burning low-sulfur fuel.

The agreement follows a similar deal between EPA and the other major cruise line operating in the country, Royal Caribbean, which also called for the installation of pollution controls on a trial basis, in lieu of using lower-sulfur fuel.

EPA's fuel sulfur regulations forced ships in the ECA to switch to fuel containing 10,000 parts per million (ppm) sulfur in August 2012 from much higher levels, and will reduce the limit again to 1,000 ppm in January 2015. The requirement prompted protests from the shipping industry, notably in Alaska, where the economy is heavily dependent on shipping for goods movement and also tourism revenue from cruise lines.

While some shipping companies have negotiated compliance alternatives to using the low-sulfur fuel, for example by committing to repower their ships with liquefied natural gas (LNG), the state of Alaska and an industry group sued EPA in the U.S. District Court for the District of Alaska, seeking to overturn the ECA agreement. Environmental groups have intervened on EPA's behalf to defend the ECA rules.

**50. Kerry: Countries Have Responsibility to Work Together on Climate Change**

On October 7th, Secretary of State John Kerry made the economic case for international action on addressing climate change, saying the world could create millions of jobs in the energy sector...
through action and is inviting catastrophe by not working to address the risks. Kerry, speaking before the Asia-Pacific Economic Cooperation CEO Summit in Bali, Indonesia, called action on climate change an international moral responsibility, but also a practical business responsibility. Failing to act on climate change would invite a global crisis, create uncertainty in the business community, and risk insolvency for insurance companies, according to Kerry.

“Energy is the solution to climate change,” Kerry said, according to a transcript of his remarks. “And the energy market is staring us in the face with an enormous amount of opportunity, and despite the amount of gas that is becoming available, we still have a responsibility, particularly those 20 major emitter nations, to deal with this issue.”

The secretary of state said finding solutions to climate change will create a $6 trillion industry over the next 20 years to 40 years. He said the $1 trillion technology industry explosion of the 1990s would dwarf the forthcoming energy revolution as 6 billion to 9 billion people adapt to the changing climate.

Kerry also said current severe floods, fires, droughts and storms are “nothing compared to what will come if we don't act.” He said increasingly severe and frequent severe weather would cause greater geopolitical unrest.

“The reduction in some of our fisheries, the melt of ice, the rise of sea level, the Pacific islands that are threatened, all of this will present us with refugees such as we have never seen before, and with food shortages that may boggle the mind,” Kerry said.

Addressing climate change is a challenge nations “can only address multilaterally,” Kerry said. The Intergovernmental Panel on Climate Change’s (IPCC) recently released report on climate change made clear the international responsibilities for action on climate change, Kerry said. The panel's draft report, released on September 27th, concluded it was extremely likely that human activity is the principal cause of climate change. IPCC defined extremely likely as between 95 percent and 100 percent certainty.

**ASIA-PACIFIC**

51. Recent Developments in China

**Beijing Makes Strong Case for Aggressive Air Pollution Action Plan**

Beijing's 5.35 million vehicles consume about 7 million metric tons of fuel and emit about 900,000 metric tons of pollutants annually, according to a September 11th report from the state-run Xinhua news agency based on information provided by municipal environmental authorities. Vehicles contribute about 86 percent of carbon monoxide, 57 percent of nitrogen oxides, 38 percent of hydrocarbon, and 22 percent of small particulate matter (PM-2.5) emissions in the city, Li Kunsheng, an official with the municipal environmental authority, said in a report from Beijing News, a newspaper affiliated with the municipal government.

As part of an action plan to reduce air pollution through 2017 that was released September 2nd, shortly before the National Action Plan (see summary below), Beijing will expand its roadside emissions monitoring network to 150 monitoring points, environmental protection bureau officials said. Information from the current 22 roadside monitoring points helped lead to fines for excessive emissions for operators of about 5,000 vehicles in the first half of 2013, according to Li. Penalties
for excessive vehicle emissions could be increased from 500 Yuan ($82) to about 3,000 Yuan ($490) under proposed ordinances.

By the end of 2017, Beijing hopes to reduce fuel consumption by about 5 percent in the city, according to the action plan. More than 4 million metric tons of gasoline and over 2 million metric tons of diesel fuel are currently consumed in Beijing annually, with diesel vehicles, particularly the more than 300,000 heavy trucks, contributing substantially, Li said.

Beijing's air pollution action plan also targets emissions from coal-fired power plants and heavy industry.

As part of its plan, Beijing is aiming to hold the number of registered vehicles in the city to around 6 million by the end of 2017. It also aims to:
• introduce more controls on vehicles, particularly on those from outside the city, including expanding restrictions on which ones can enter inside the sixth-ring road (which runs around the city about 10 to 12 miles from the center) on certain dates and times;
• promote the use of alternative fuel vehicles to reduce air pollution;
• upgrade vehicle emissions standards to the equivalent of Euro 6 by 2016 and further tighten fuel quality standards; and
• move to scrap about 1 million older vehicles that do not meet current tailpipe and fuel quality standards.

Other measures being considered include congestion fees and progressive parking pricing, though these are in a study phase and it is uncertain when or if they would be implemented by 2017.

Beijing’s Air Pollution Action Plan outlines responsibilities of municipal departments and district governments through 2017. It is the first in a series of measures to restrict consumption of coal-generated energy, shutter the most polluting businesses, promote so-called new-energy vehicles, and increase fees for airborne emissions, the government said.

Beijing’s municipal Environmental Protection Bureau called the plan a “declaration of war” against PM-2.5 and said it would “work relentlessly” to improve air quality.

The action plan said several municipal government bodies will release a plan to reduce coal consumption in several industries in Beijing, including cement, petroleum, chemical, and machinery production. By the end of 2013, Beijing will release a catalog detailing production methods and technologies to be prohibited in the iron and steel, cement, coking, nonferrous metal, aluminum, glass, and other heavy industries. By the end of 2016, about 1,200 of the most-polluting businesses will be upgraded, closed, or moved away from the city, it said.

Companies that violate environmental regulations will have restrictions placed on bank loans and other government funding, according to the plan. Districts that fail to meet emissions goals will have approvals for future projects restricted.

By the end of 2013, Beijing also plans to increase pollution discharge fees for sulfur dioxide and nitrogen oxides emissions and to begin charging pollution fees for volatile organic compound emissions. Environmental impact assessments for future projects in Beijing will need to include estimates of these emissions. Beijing hopes to establish an emissions trading system for these pollutants by the end of 2014.
Beijing will attempt to reach a goal of zero growth in the number of cars on its roads by the end of 2017. It plans to accomplish this, in part, by requiring the retirement of older vehicles that do not meet current exhaust and fuel standards and by limiting the number of license plates it issues each month.

Starting next year, the city plans more restrictions on which vehicles can be used within the fifth-ring and sixth-ring roads, including cars registered both in Beijing and elsewhere.

By the end of 2014, all new heavy-duty diesel vehicles will be required to install devices to trap particulate matter and to meet Beijing V tailpipe emission standards. Beijing also will implement plans to encourage the use of new-energy and cleaner energy vehicles, including those using natural gas, with an aim of having 200,000 such vehicles—particularly for public transportation—in use by the end of 2017.

**Traffic Jams Test Beijing's Patience**

Heavy traffic on recent afternoon in Beijing

Travel peaked on a recent afternoon as the traffic data released by the Beijing Municipal Commission of Transport (BMCT) showed that the average vehicle speed was only 24.4 km per hour.

September is considered the most congested month in Beijing with the new school year and holidays such as the Mid-Autumn Festival and National Day contributing to congestion. Festival traffic jams are particularly loathed by citizens, with some blaming the surge of private car ownership and the inefficiency of the public transportation system.

Figures from the BMCT show that as many as 5.35 million private cars had been registered in the city by the end of July this year.

Subway Line 4, one of the busiest, running 50 kilometers through western Beijing, suspended operations for nearly two hours recently due to a signal failure, leading to even worse congestion during the morning rush. The congestion also raised public concern over air pollution from vehicle emissions.

In addition, vehicle emissions are closely related to their running speed. "When a car runs at 20 to 30 km per hour, its emission can be three times more than at 60 km per hour," said Li Kunsheng, the official in charge of car emissions with the bureau. "Environmental protection can only be achieved through easing traffic congestion," Li added.
China Issues Comprehensive National Air Pollution Plan; Targets Key Regions

China's State Council has approved 35 measures to combat air pollution through 2017, primarily focusing on three highly developed regions with large urban populations where citizens are increasingly complaining about poor air quality. In a September 12th statement, the State Council said that China's air pollution situation is “grim.” It said it has developed the air pollution action plan to help achieve the “Chinese dream” of sustained and healthy economic development and to protect social harmony and stability. The measures include new efforts to strengthen management of motor vehicles, restructure heavy industry and reduce coal and energy consumption.

The three target areas are the state-level municipalities of Beijing and Tianjin and Hebei province; the Yangtze River delta region that includes Shanghai; and the Pearl River delta region in Guangdong province that includes several major cities and is next to Hong Kong. Environment Minister Zhou Shengxian said that the Ministry of Environmental Protection will work with the three target areas “to accelerate the introduction of implementation details,” according to a statement posted on the ministry website.

The State Council plan aims to reduce concentrations of small particulate matter (PM-2.5) in major cities by 10 percent by 2017 compared to 2012 levels, with higher targets set for the three focus areas—a 25 percent reduction in the Beijing-Tianjin-Hebei area, a 20 percent reduction in the Yangtze River delta region, and a 15 percent reduction in the Pearl River delta area.

Beijing has adopted its own action plan (see above) that calls for reducing PM-2.5 pollution 25 percent to 30 percent from 2012 levels by 2017, depending on the district, with a targeted average daily intensity ranging from 50 micrograms to 60 micrograms per cubic meter.

The State Council statement said China is attempting to adopt “polluter pays” principles in its environmental regulations and use market mechanisms such as pricing, taxes and other policies to encourage emission reductions and investments in industries focused on air pollution control.

The plan calls for managing sources that emit multiple pollutants, upgrading smaller coal-fired boiler systems, increasing industries' use of desulfurization and denitrification technology, boosting building energy efficiency and heat metering requirements, managing urban dust and outdoor air pollution from food service industries, getting older vehicles off the roads, upgrading fuel quality, enhancing traffic management and promoting so-called new energy vehicles.

Under the plan, 60 percent of new public buses purchased for Beijing, Shanghai and Guangzhou will have to be powered by either new energy systems (electric, hybrid) or cleaner fuels (LNG or CNG).

By the end of 2015, all large cities in the three main air pollution control areas will be expected to have switched to China V gasoline and diesel fuel (the China equivalent to Euro V), which has a maximum sulfur content of 10 parts per million. China V gas is already being rolled out in several cities in those regions. China IV diesel fuel with 50 PPM maximum sulfur content will be required nationwide by the end of 2014.

Another focus is on adjusting the structure of industry, which would include more controls on industries with high energy consumption and high emissions levels. Outdated capacity and overcapacity are to be eliminated by closing old cement, steel, aluminum and glass production...
facilities. The plan accelerates a timetable for closing certain facilities by one year to the end of 2014.

Improving technology and supporting the growth of two of what the government calls “strategic industries”—the environmental protection and new energy industries—are also highlighted in the plan.

China aims to lower the portion of primary energy derived from coal to 65 percent by 2017, with a more focused goal of achieving negative growth in coal-based energy consumption in the three regions targeted in the plan.

Non-fossil fuel-based energy sources are to comprise about 13 percent of the energy mix by 2017, aligning with progression toward a previously set national goal of 15 percent by 2020. The figure currently stands at about 11.4 percent. Included in this is a big push for building more nuclear power plants, with a projected installed capacity of 50 gigawatts by 2017, compared to the current 12.5 gigawatts.

Authorities in the three key control areas have already been discussing coal consumption caps and bans on the building of new coal-fired power units in their areas, according to numerous reports and government statements. Under Guangdong provincial plans announced in March, total coal consumption in the Pearl River Delta Area will be capped at 160 million metric tons annually by 2016.

Plans to construct a large coal-fired power plant on the Dapeng peninsula near Shenzhen in Guangdong province have been put on hold due to resistance from some local legislators and officials from the Shenzhen Land and Resources Bureau and Environmental Protection Bureau, according to recent local state-media reports.

The State Council plan also calls for increasing environmental impact assessment requirements, particularly in areas with fragile ecosystems and in environmentally sensitive areas, and for establishing mandatory pollution disclosure systems for heavily polluting industries.

The three key regions will be required to conduct annual air pollution control assessments to better coordinate regional governance over airborne emissions.

Areas will be required to expand air pollution monitoring systems and establish emergency action plans for times of heavy air pollution, a program that is already being implemented in several places including Beijing and Guangdong province. The emergency air pollution action plans will be required throughout the three main areas by the end of 2014 and in all other large cities by the end of 2015.

Environmentalists welcomed the plan but were skeptical about its effective implementation.

"The coal consumption reduction targets for key industrial areas are a good sign they are taking air pollution and public health more seriously, but to make those targets happen, the action plan is a bit disappointing and there are loopholes," said Huang Wei, a campaigner with Greenpeace in Beijing. China has struggled to get wayward provinces and industries to adhere to its anti-pollution measures and there were few concrete measures in the new plan to help strengthen its ability to monitor and punish those who violate the rules. "We don't see any fundamental structural changes, and this could be a potential risk in China's efforts to meet targets to reduce PM 2.5," said Huang.
Greenpeace says that there is no chance of a 25% drop in PM2.5 levels in Beijing over the coming five years. It has calculated that to achieve the 2017 target of a 25% cut in PM2.5 levels, coal use will have to fall by between 80 million and 90 million tons in the Beijing-Tianjin-Hebei region over the next five years, while annual increases in coal use in Shanxi and Inner Mongolia will have to be restricted to 2% or less. The figures released by Beijing and its neighbors do not go this far. Huang Wei said that the action plan only talks about reducing coal. “There aren’t any genuine binding targets, and provincial governments are left to make their own commitments. That means any benefits for air pollution will be heavily discounted.”

Green groups were expecting the action plan to include detailed regional coal consumption cuts, but those cuts appear to have been left to the provinces to settle themselves.
Since taking power in March, the government under President Xi Jinping and Premier Li Keqiang has repeatedly pledged to make environmental protection a higher priority. Xi and Li have said they want economic growth that does not cause ecological damage.

The State Council appeared to make severe concessions during three months of intense behind-the-scenes bargaining with local governments and powerful industrial sectors who stand to lose the most from any effort to curb pollution. Gone were the most biting parts of earlier proposals, such as binding caps on coal consumption and cuts to heavy industry in key regions. Previous plans had called for reducing coal use by specified amounts in the regions surrounding Beijing, Guangzhou and Shanghai by 2017.

Instead, the final plan says that coal should account for no more than 65 per cent of energy by 2017, a decrease of only two percentage points from last year. The government had already planned to cut the ratio to 65 per cent by 2015, so the new goal can even be seen as a step backwards.

The State Council has ordered only the country’s most developed regions to reduce concentrations of PM2.5 - potentially harmful particles in the air smaller than 2.5 microns in diameter - over the next five years. The Beijing-Tianjin-Hebei region must cut PM2.5 by 25 per cent, the Yangtze River Delta by 20 per cent and the Pearl River Delta by 15 per cent. Other urban areas have been told only to cut levels of the larger PM10 pollutants by 10 per cent.

The new State Council drafted its action plan in April, but waited until mid-June to publish a 10-point framework, which provided few details. In the subsequent weeks, environment minister Zhou Shengxian twice promised a more detailed version "very soon", which did not materialize until September. According to press reports, intense negotiations were to blame. Vice-Premier Zhang Gaoli, who oversees environmental issues, told a meeting in June that the plan had already been revised more than 20 times, according to Wen Wei Po newspaper. The issue was even raised at a meeting attended by the Politburo's Standing Committee, China Central Television reported, citing Zhang.

"It is rare for a single piece of environmental policy to go to the top echelons of the leadership. It shows its high-level political significance," said a source close to the environment ministry. "It might also suggest that disagreement over the plan was so severe that it could not be settled at a State Council meeting."

Yang Fuqiang, a Beijing-based energy adviser with the Natural Resources Defense Council, said quantified coal-reduction targets were dropped because the gap was too wide between the central government's goals and what local governments were willing to accept.
For example, Hebei province, the country's largest producer of iron and steel and third-largest coal consumer, was at first asked to cut its annual coal consumption by 100 million tons, according to the 21st Century Business Herald. That is more than double the 40 million tons offered by Hebei.

The final plan asked the three industrial regions around Beijing, Shanghai and Guangzhou to "strive for a reduction in total coal consumption".

Eastern coastal regions would be allowed to source more thermal electricity from other provinces through the power grid, raising the possibility that China's coal consumption would be moved inland rather than actually reduced. "For (big coal-producing) places like Shanxi and Inner Mongolia, this might be a potential loophole for them to actually increase their coal consumption," Huang said.

Experts also said China's bid to tackle coal consumption could be stymied by its weak monitoring capability. "Measuring is still a big problem. Even if you look at the provincial energy data and the national data, there is a massive discrepancy of around 200-300 million metric tons and it could be more than that," said Yang Fuqiang.

**China Resolved To Fight Against Air Pollution**

Chinese Vice Premier Zhang Gaoli has called for resolute and steady efforts to combat air pollution in heavily-polluted areas surrounding the country's capital.

Zhang, also a member of the Standing Committee of the Political Bureau of the Communist Party of China (CPC) Central Committee, made the comments at a meeting on the prevention and control of air pollution in Beijing and its surrounding areas. At the meeting, the Ministry of Environmental Protection (MEP) and the governments of six province-level regions signed an agreement on the goals and responsibilities for air pollution prevention and control.

The six regions, all located in the northern part of China, suffer the most from heavy air pollution, including capital Beijing, municipality Tianjin, provinces of Hebei, Shanxi and Shandong and Inner Mongolia Autonomous Region.

Earlier statistics by the MEP showed that air pollution in Beijing and its neighbors Tianjin and Hebei was heavier than other parts of the country in August. A total of 13 monitored cities in the region had about 20 of the 31 days in August failing to meet the required standards, said the MEP.
Describing the fight against air pollution as a "long-term, arduous and complicated task," Zhang called for determination and steady methods that focus on key areas and are implemented gradually. "Cities that are heavily polluted should be key targets, with strengthened supervision on various pollution sources and efforts to cut them down," said Zhang.

He stressed less use of coal, clean energy as substitutes, emission reduction for automobiles, promotion of public transportation and environment-friendly industrial technology.

According to Zhang, during the coal-fueled heating period in winter, pollution monitoring should be strengthened, and low-quality coal should not be used for heating and cooking.

He also urged local governments to set strict goals and shoulder responsibilities for the quality of air within their jurisdictions.

The vice premier called for a system that enables coordinated anti-pollution efforts from multiple regions in supervision and law enforcement as well as an environmental information sharing platform.

**China Misses Opportunity to Skip to China 6 Vehicle Emissions Standards**

Shortly after issuing the National Action Plan, the Ministry of Environmental Protection issued a stricter regulation on light vehicle emissions, the fifth of its kind in the country, which will be fully implemented nationwide on January 1, 2018.

Beijing municipality already has a supply of low-sulfur fuel (maximum of 10 PPM) and is qualified to implement the new regulation. The State Council, China's Cabinet, has approved Beijing to carry out the new standard immediately after its release. Cities with such fuel supply are encouraged to implement the fifth standard in advance of the national requirement, the ministry said.

The fifth standard is equivalent to the current regulation on light vehicle emissions in Europe, so called Euro 5, according to the ministry.

Unfortunately, the Ministry missed the opportunity to move boldly to China 6/VI requirements nationally in 2018. Nationwide fuel quality would be sufficiently clean to allow vehicles with the tighter standards.

**China Updates Alternative Energy Vehicle Subsidies, Expands Demonstration Areas**

China's Ministry of Finance has updated the subsidies available for purchases of all-electric, plug-in hybrid, and hydrogen fuel cell vehicles and announced plans to expand the network of demonstration areas for such vehicles. The ministry said on its website on September 16th that the changes will help combat urban air pollution and spur growth in the manufacture of cleaner vehicles, which the government has identified as a “key strategic industry.”

The subsidy program, which runs through the end of 2015, will cover between 35,000 and 60,000 Yuan ($5,715 to $9,800) of the cost of the purchase of all-electric passenger vehicles, depending on their travel range. Models that can travel 250 kilometers (155 miles) on a single charge will be eligible for the biggest subsidy. Key provisions include:
- Subsidies of 35,000 Yuan for hybrid plug-in vehicles will be restricted to those with an extended range above 50 kilometers (31 miles), meaning the engine can be run fully on electricity over that range before switching to gasoline power to recharge the battery, as opposed to powertrain-driven hybrids which switch frequently between electric and gasoline power.

- All other plug-in hybrids are eligible only for existing fuel-efficient engine subsidy programs, which offer about 3,000 Yuan ($490) off the purchase price.

- For hydrogen fuel cell-powered vehicles, included for the first time in the subsidy program, private passenger vehicles will be eligible for up to 200,000 Yuan ($32,670) while commercial vehicles can receive 500,000 Yuan ($81,680) in subsidies.

- Subsidies for all-electric buses will range from 300,000 to 500,000 Yuan ($49,010 to $81,680) depending on length, with those over 10 meters getting the highest subsidy. Extended range plug-in hybrid buses over 10 meters in length will be eligible for subsidies of 250,000 Yuan ($40,850).

- Subsidies will be adjusted downward by 10 percent toward the end of 2014 and by 20 percent in 2015 for private passenger vehicles, but will remain constant for eligible buses throughout the period, the ministry said.

The subsidy program is being run jointly by the National Development and Reform Commission and the ministries of Finance, Industry and Information Technology, and Science and Technology.

The Ministry of Finance also said cities in three areas of China with significant air pollution can apply to be pilot new energy vehicle demonstration cities if they have not already been so designated. Demonstration projects will primarily focus on the use of new energy vehicles for government and public transportation. The three areas are the state-level municipalities of Beijing and Tianjin and Hebei province; the Yangtze River delta region of eastern China; and the Pearl River delta region in southern China. On September 12th, the State Council announced plans to combat air pollution through 2017 that will focus in large part on the three areas.

Cities accepted into the vehicle demonstration program will receive grants from the central government to help pay for electric vehicle infrastructure such as charging stations. Details of the grants and standards will be released later, according to the ministry.

Larger cities that apply will need to have plans to promote the use of about 10,000 new energy vehicles, with smaller cities and districts or areas required to have plans for promoting the use of at least 5,000 such vehicles.

In an early August press briefing, Dong Yang, head of the China Association of Automobile Manufacturers, said one of the biggest issues blocking further new energy vehicle development was local protectionism, whereby local governments provide incentives to local vehicle makers to help them grab market share. To get around local protectionist policies, local governments will be required to ensure that at least 30 percent of the new energy vehicles are non-local brands. In addition, at least 30 percent of government vehicles purchased in pilot cities must be new energy vehicles.
The ministry said the pilot programs will be evaluated annually and jurisdictions unable to meet targets could be dropped from the program.

Areas interested in applying must submit their local implementation plans to the National Development and Reform Commission and three ministries by October 15th.

**China Raises Prices Of Cleaner Fuels to Incentivize Refiners, Control Emissions**

China will raise the prices of cleaner transport fuels to incentivize refiners as it tried to control pollution in the country. The National Development and Reform Commission said that it will increase the price of gasoline and diesel used in vehicles that meet National IV standards by Yuan 290 ($47.38)/MT and Yuan 370/MT, respectively.

The price of National V standard gasoline will be raised by Yuan 170/MT while that for National V standard diesel will rise by Yuan 160/MT, the commission said.

The National IV standard caps sulfur levels in fuels at 50 ppm while National V limits sulfur to 10ppm. Under the country's timetable of fuel quality upgrades, motor gasoline should meet the 'fourth-phase' standard by the start of 2014 and motor diesel by the start of 2015; both gasoline and diesel should meet the 'fifth-phase' standard by the start of 2018. National V standards are to be introduced in Tianjin, the Yangtze and Pearl River Deltas and other major cities by late 2015. Beijing has already introduced 10 ppm sulfur fuels.

"After the oil quality upgrade, prices will follow the principle of 'polluter takes responsibility'; and whoever consumes more will bear more cost," the NDRC said.

It added that the price increases are a reasonable reflection of costs, fuel quality and pollution and they were determined based on companies' costs to upgrade to cleaner fuels. More importantly, both refiners and consumers will bear the overall cost burden, although it did not detail the exact proportion. (In discussion with MOF in 2012, officials indicated an interest in having the government absorb one-third of the cost through tax modifications, the companies absorb a second third and the consumer the final third.)

Sinopec reported a total capital expenditure in refining of Yuan 32.16 billion last year, while it spent Yuan 7.7 billion in the first half of 2013, "mainly for upgrading oil product quality and revamping projects for processing lower-quality crude oil," it said in its interim report released in August. PetroChina spent Yuan 36 billion in its refining and chemicals division last year and expects total investment in the segment to be Yuan 32.4 billion this year.

The NDRC said in recent years that higher fuel specifications have been adopted in Beijing, Shanghai, Guangdong, Jiangsu and other provinces and cities, with good results.

The commission worked with the finance ministry, local government departments and state-owned refiners PetroChina and Sinopec to monitor and audit the implementation of National IV and V fuel standards before arriving at the cost increases. In Beijing, for example, it calculated that the cost of moving from National II to National IV fuel standards was Yuan 410/MT for automotive gasoline and Yuan 480/MT for diesel.

Currently all three standards of fuels from National III to V are still being used across the country and it is up to individual local governments and enterprises to ensure that the new pricing rules will be implemented smoothly to protect consumer interests, the NDRC said.
The government has said it will provide subsidies to vulnerable sectors likely to be hit by the cost increases, including agriculture, forestry, fishing and public transport.

**Sinopec to Offer China IV Gasoline Nationally, China V in Select Areas Ahead of Schedule**

The China Petroleum & Chemical Corp., or Sinopec Ltd., has announced that it will begin supplying China V quality gasoline for vehicles in select cities and China IV gasoline, a lower grade, nationwide as of October 1st, three months ahead of schedule. Except for two subsidiary plants that are undergoing maintenance, the top Asian refiner will cut sulfur in all its gasoline production from 150 parts per million (ppm) to 50 ppm from October 1, a company official said. Subsidiary plants in Fujian and Hainan will move to the new grade in November after overhauls, the company official said.

Sinopec, one of China’s three main oil companies, said on its website on August 29th that it plans to offer China V, the equivalent to Euro V fuel, in Shanghai municipality and eight cities in neighboring Jiangsu province, as well as six cities in the southern province of Guangdong. The Jiangsu cities include Nanjing, Suzhou, Wuxi, Changzhou, Zhenjiang, Yangzhou, Nantong, and Taizhou. In Guangdong, the fuel will be available in Guangzhou, Shenzhen, Dongguan, Foshan, Zhongshan, and Zhuhai. Capital city Beijing was the first to use grade V in May 2012.

China IV fuel is required to be offered nationally as of January 1, 2014. China V fuel is expected to be offered nationwide as of January 1, 2018, though a final implementation date has not been formally announced.

Gas stations currently must provide at least China III quality fuel, which must have a sulfur content below 150 ppm. China IV fuel must have a sulfur content below 50 ppm, and China V a sulfur content below 10 ppm.

Sinopec also said it expects to supply China V diesel fuel starting Jan. 1, 2015.

China burns roughly two million barrels per day of gasoline; despite slowing economic growth, Chinese demand for gasoline has expanded much faster than diesel this year, thanks to strong growth in car sales.

The company has from end of May cut the sulfur content of all of its diesel production to a maximum 350 ppm. Emissions from lower-quality diesel are among the main culprits for urban air pollution.

**Refrery Projects Suspended After Companies Fail to Meet Emissions Targets**

China National Petroleum Corp. and China Petrochemical Corp., the nation’s biggest oil and gas producers, had their new refining and chemical projects suspended after failing to meet the government’s 2012 pollutant reduction targets. They can’t seek environmental reviews of new or expansion projects, except for ones that aim to upgrade oil quality or reduce emissions, the Ministry of Environmental Protection said in a statement posted to its website on August 29th, without providing a list of projects. China is toughening its stance on oil companies and their emissions to combat the nation’s worsening pollution.
The ministry will assess the companies’ measures to improve emissions before the suspensions can be lifted, it said.

China Petrochemical, known as Sinopec Group, failed to meet the target on nitrogen oxides emissions, and CNPC failed in chemical oxygen demand, according to the statement.

Six other state-owned companies chosen for the tests, including Shenhua Group Corp. and China Huaneng Group Corp., met all emission targets, the ministry said.

Sinopec Group accepted the suspension and will invest more money to upgrade equipment to meet the environmental requirements, spokesman Lv Dapeng said in an e-mailed statement. Over the next three years, it will spend 22.9 billion Yuan ($3.7 billion) on 803 improvement projects, according to the statement.

Lv said four subsidiaries in the provinces of Henan, Anhui, Sichuan and Shanghai failed to meet emission standards. Sinopec's other units, which number about 120, have all met the targets, Lv said.

CNPC will push its units to reduce pollution and meet the target set in the five-year plan ending in 2015, the official Xinhua News Agency reported, citing an unidentified company official.

People’s Daily said the MEP's move would have no impact on 790,000 barrels per day of refining capacity now under construction.

"Such tough punishment on the two oil majors is unprecedented - it is a warning to others," said Wang Tao, resident scholar at the Energy & Climate Program of the Carnegie-Tsinghua Center for Global Policy in Beijing. "But the MEP has only suspended approval for their new refineries, and what we really need is for them to take strong measures to curb pollution from existing refineries," said Wang.

The MEP and its local branches have struggled to impose their will on state-owned industrial enterprises, which are big sources of economic growth as well as pollution. But the national government has promised to get tough on firms accused of ignoring environmental rules or approval procedures.

People's Daily said the decision "demonstrated China's determination when it comes to pollution emissions." The two firms were given time to rectify their problems after failing to meet emissions targets in 2011, but they did not install mandatory pollution controls at many of their facilities, the paper said. Several CNPC subsidiaries also supplied falsified emissions data to authorities, it said. In May, the MEP said a subsidiary of CNPC, together with several state-owned power and steel enterprises, deliberately misused emissions control technology and submitted inaccurate data. A nationwide investigation into the problem is underway.

Big state-owned firms have reportedly been complaining to the National Energy Administration that the current emissions standards are too tough and that more incentives and subsidies are required to help them comply. People's Daily, however, said CNPC and Sinopec could not blame funding problems for these "extremely embarrassing circumstances" because they had both managed to meet tough pollution standards at their overseas projects. "Central government-run enterprises have enough technology and funds to resolve these problems - the problems arise in the subsidiaries but the root cause is in the group companies," it quoted an official with the environmental ministry as saying.
This is the first time the Ministry of Environmental Protection (MEP) has used these restrictions against the two oil giants. Chai Fahe, deputy director of the Chinese Research Academy of Environmental Sciences (CRAES), said that “this moratorium will really shake them up.”

The two companies reacted swiftly. Sinopec announced a three year, 28 billion Yuan (US $163 million) “Blue Water, Blue Skies” program, the most intensive and wide-ranging one-off environmental clean-up by any Chinese company thus far. CNPC offered over seven billion Yuan (US $40 million) for improvements, with one MEP official saying “they rushed over to ask us what equipment they needed to meet our requirements.”

According to the MEP, the two companies lack essential equipment: “CNPC has 115 coal-fired furnaces, one third of which have no desulfurization equipment. None have nitrogen oxide (NOx) removal equipment. Of Sinopec’s 174 furnaces, 40% have no sulfur scrubbers, and only 4 have NOx removal equipment.”

In hindsight, this makes the two companies’ environmental record extremely questionable. Both issued corporate social responsibility reports about six years ago – and were among the first state-owned firms to do so. The environmental sections were substantial and mainly focused on ensuring environmental safety and meeting emissions targets – there was little suggestion of any problems.

Even in 2011 and 2012 – the years in which the MEP says the two firms failed to meet standards – CNPC’s report showed significant drops in four major pollutants. The only discordant note was Sinopec’s admission that in 2012 NOx emissions had increased.

There are also discrepancies between the emissions figures reported by the companies and the data obtained by the MEP. In 2012 the MEP found that chemical oxygen demand emitted by CNPC had dropped by 0.08%, while CNPC’s own report claimed a drop of 1.2% - a fifteen-fold difference. The figures for the last three years show that in the vast majority of cases the company figures are more favorable than those of the MEP – often by a factor of ten or more.

One MEP official said that in the past the two oil giants were able to do what they wanted on emissions: “But when we increased the number of central state-owned firms under closer monitoring these two were included. The problems came out during rigorous emissions audits.”

Measuring pollution remains one of the ministry's biggest challenges. It said earlier this month that it was planning to spend 40 billion Yuan ($6.54 billion) over the 2011-2015 period to try to beef up its monitoring systems.

Some have argued that increased scrutiny of China’s oil giants is long overdue, citing the issue of fuel standards (which has major implications for air pollution) as representative of general industry obstructiveness. According to Chai Fahe, China’s fuel standards have been lagging for years. “The new diesel standards have had to be pushed back twice, and they're a big reason why.”

Yue Xin, head of the Vehicle Fuel Emissions Laboratory at CRAES said that the two oil giants are hugely influential in setting fuel quality policy. For example, a fuel standard cannot be set without asking the two companies if they can provide that standard of fuel. “Often they just say they can’t, and the draft standard gets scrapped.” The companies also complain about the huge costs involved in meeting higher standards.
Some go so far as to argue that the companies have been in control of the whole process of environmental oversight. An MEP official admitted that under the planned economy, central state-owned firms became too powerful in certain areas. “They set standards, approve projects, accept the project on completion, and then supervise themselves.”

**China to Publish Monthly List of 10 Worst Polluted Cities**

China will publish a list of its 10 worst - and best - cities for air pollution each month, a top leader announced, as the country pushes officials to dispel a persistent smog crisis that is fuelling public anger. Vice Premier Zhang Gaoli said the move would help cities meet targets for cleaning up their air and promote more environmentally-friendly economic growth.

It did not say when publication of the lists would start.

"Local government must accept responsibility for air quality, and the state will publish every month a list of the 10 worst and 10 best cities for air pollution," the statement quoted Zhang telling a meeting in the capital, Beijing, as he urged all parts of the country to meet their targets. "Combating air pollution is a long-term, difficult and complex task," Zhang added. "We must stress the cleaning up of polluted cities and the cutting and management of pollutants."

**Report Says Pollution Worse in August than in July**

Ozone and fine-particle pollution worsened China's air quality in August compared with July, the Environmental Protection Ministry has reported on its website. Twenty-eight of the 74 cities mentioned in the report had good air quality for at least 24 days in August. The number of such cities in July was 36. Key facts:

- Nationwide, the proportion of days with good air quality in August was 66.7 percent, 4 percentage points lower than in July.
- In the Yangtze River Delta region cluster, 67.2 percent of days in August had good air quality, 6.3 percentage points lower than in July.
- The proportion in the Pearl River Delta region cluster was 76 percent, a decline of more than 14 percentage points compared with July.
- The cluster of Beijing, Tianjin and Hebei province remained the most polluted region, according to the announcement.
- Of the 19 cities with good air quality for fewer than 15 days in August, 12 are located within that cluster. Seven cities in Hebei province ranked in the top 10 most polluted cities in August.
- Ozone and PM2.5 — particulate matter smaller than 2.5 microns in diameter that can go deep into the lungs — are the top two pollutants within the cluster, each accounting for the major cause of more than 40 percent of the polluted days.
- Ozone pollution was even more severe in the other two clusters in August, occupying more than 97 percent of the polluted days within the two regions. That situation
corresponds with weather in June and July, when there are high temperatures and strong sunshine, the perfect conditions for the formation of ozone.

Ozone is an invisible pollutant that is harmful to the respiratory tract and in high concentrations it could cause irreversible damage to the lungs and central nervous system.

"Though particulate matters in the air may block some sunshine for ozone to form, high concentration of ozone does not guarantee low concentration of PM2.5," said Chai Fahe, vice-president of the Chinese Research Academy of Environmental Sciences.

A provincial-level emergency response system for heavy pollution days has also been set up, under a plan released by the Hebei provincial government in August. The plan says if the provincial meteorological observatory predicts an air quality index reading of above 200, which indicates a heavy pollution day, for the following 24 to 72 hours, the observatory should hold a meeting with the monitoring station to acquire accurate details of the pollution, such as the time range, the geographical areas and the levels. All information should be reported to the provincial government before noon and later be released to the public.

**Chinese Government Presses Provinces on Energy Savings, Emissions Reductions**

On August 27th, the National Development and Reform Commission (NDRC), the country's top development body, released a statement reminding provinces and local governments to work toward meeting energy intensity and emissions reduction goals. The NDRC had reprimanded several provinces on August 12th for not meeting energy intensity reduction goals in the first half of 2013, including the provinces of Hainan and Yunnan, and the autonomous region of Xinjiang, which were the worst performers.

In its latest statement, the NDRC said that energy intensity reduction targets and emissions reduction targets for nitrogen oxides are "behind schedule" and that in order to achieve the goals of the country's 12th Five-Year Plan (2011-2015), energy intensity would have to drop 3.84 percent on average annually and nitrogen oxide emissions would need to drop by 4 percent or more, over the next two years.

Under the current five year plan, China aims to reduce energy intensity, or energy use per unit of gross-domestic product, by 16 percent, and reduce emissions of nitrogen oxides by 10 percent, both compared to 2010 levels, by 2015.

The NDRC said that failures to meet goals for reducing energy-intensity and key emissions would be an important part of evaluating the overall performance of local officials.

On August 28th, the Ministry of Environmental Protection (MEP) singled out Hainan, an island province off of southeast China, in an announcement on its website, saying that the provincial Party Secretary of Hainan had visited top officials in six counties that had failed to meet key emission reduction targets. Four of the counties did not meet targets for reducing airborne emissions of nitrogen oxides and two of the counties failed to meet targets for reducing ammonia nitrogen in wastewater emissions.

The statement said that the MEP and the provincial authorities have called on the counties to press businesses there to install and operate denitrification equipment and for those counties to further improve their wastewater treatment and sewage pipeline systems.
China, California Agree to Collaborate To Combat Climate Change for Two Years

China’s top climate official and the governor of California have signed a two-year memorandum of understanding to combat climate change. Xie Zhenhua, vice chairman of the National Development and Reform Commission, and Gov. Jerry Brown signed the memorandum on September 13th to cooperate on lowering carbon dioxide emissions and strengthening greenhouse gas emission standards. The memorandum calls for collaboration on designing and implementing carbon emissions trading systems, low-carbon development programs, and clean, energy-efficient technologies.

The agreement, which was signed in San Francisco, is the first of its kind between the Chinese commission and a subnational entity to mitigate climate change, the release said. Its efforts will aim “to strengthen and coordinate efforts to combat global climate change, promote clean and efficient energy and support low carbon development, while protecting public health, the environment and natural resources,” the memorandum said.

In addition to his role with the National Development and Reform Commission, Xie is China’s lead international climate negotiator.

“I see the partnership between China, between provinces in China, and the state of California as a catalyst and as a lever to change policies in the United States and ultimately change policies throughout the world,” Brown said in the release.

China and California have worked together several times over the past year and a half on environmental issues. Most recently, on April 10th, Brown and Chinese Minister of Environmental Protection Zhou Shengxian signed a two-year pact agreeing to collaborate on strategies and technologies to reduce air pollution.

The new memorandum will encourage collaboration on policy and programs, temporary exchanges and trading of officials, and sharing of information on rule-making and policy processes.

China should pursue 'high-quality' urbanization: top economic planning body

China must plan scientifically for "high-quality" urbanization that is human-oriented and energy-saving, a senior official at the country’s top economic planning agency said in recently published remarks. Zhang Xiaoqiang, vice head of the National Development and Reform Commission, also said China’s urbanization level, at about 52 percent of the population, still has a long way to catch up with that of developed economies and even some Asian countries. "Our urbanization should embody the concepts of green, intensive, intelligent and low-carbon and it does not mean simply building things or enclosing land," he said in an interview at the World Economic Forum in the northeastern port city of Dalian that was posted on the NDRC’s website.

His remarks echo those of Premier Li Keqiang, who told a recent meeting of experts on the subject that urbanization should focus on quality of life and the environment and should be driven by job creation.

China’s leaders have an ambitious plan to boost the urban population by 400 million over the next decade, a key plank in a reform effort to restructure the economy away from credit and export growth to one where consumers provide the main impetus.
The NDRC has said it will unveil an urbanization plan in the second half of this year.

Zhang added that China has the necessary means to maintain a relatively high growth rate in the future, considering the domestic demand potential to be released from urbanization. He also reiterated that Beijing would speed up efforts to deepen reforms in energy prices, the financial sector and fiscal and tax systems to better allocate resources and narrow the wealth gap in the country.

**World Bank Chief Urges China to Better Manage Urbanization**

China must plan its massive urbanization better to limit environmental damage and to ensure that millions of migrants benefit more from the process according to World Bank Group President Jim Yong Kim. "China is well aware that its rapid urbanization and rapid economic growth has come at a cost, even as that growth has lifted hundreds of millions of people out of poverty," Kim told a news conference at the end of a four-day visit to China.

In the past 30 years, China's urban population has jumped to more than 700 million from less than 200 million. The dramatic shift sometimes has triggered violent clashes over expropriation of farmland for development, as well as water shortages, pollution and other problems.

"China now needs to find new ways to make cities more energy efficient, promote clean energy, and reduce traffic congestion and air pollution," he said. "If China breathes easier, the world will breathe easier, too."

As part of efforts to make consumers the main driver of the economy, China's leaders aim to have 60 percent of its almost 1.4 billion population be urban residents by 2020.

Kim said the bank hopes China can build denser cities where people live closer to their work, with better transport systems.

The World Bank is working with the Development Research Centre - the cabinet's think-tank - to shape a "strategic view" on how China should proceed with urbanization, he said, adding that their report could be made public by December.

Premier Li Keqiang recently flagged the need for "humanity-centered" urbanization and he solicited views from Chinese experts on how to improve the process.

The National Development and Reform Commission (NDRC) delayed release of an urbanization plan from the first half of the year. A top official has said it will come out in the second half.

**Smog Emergency Shuts City of 11 Million People**

Choking smog all but shut down one of northeastern China's largest cities recently, forcing schools to suspended classes, snarling traffic and closing the airport, in the country's first major air pollution crisis of the winter. An index measuring PM2.5 reached a reading of 1,000 in some parts of Harbin, the gritty capital of northeastern Heilongjiang province and home to some 11 million people. A level above 300 is considered hazardous, while the World Health Organization recommends a daily level of no more than 20.
A woman walks along a street during a smoggy day in Changchun, Jilin province, October 22, 2013.

Photo: China Daily

The smog not only forced all primary and middle schools to suspend classes, but shut the airport and some public bus routes, the official Xinhua news agency reported. Visibility was reportedly reduced to 10 meters.

The problem was partly blamed on the government turning on the heating for the winter. Collective central heating, activated on a date set by the government, provides heat to 65 percent of Harbin, figures quoted last year in the state media show. Much of that heat comes from burning coal. Beijing's central heating normally comes on in mid-November.

Other parts of northeastern China also experienced severe smog, including Tangshan, two hours east of Beijing, and Changchun, the capital of Jilin province which borders Heilongjiang.

Beijing suffered its own smog emergency last winter when the PM2.5 surpassed 900 on one particularly bad day in January.

**MEP To Send Air Pollution Inspection Teams To Provinces**

China's Environment Ministry has announced that it will send inspection teams to provinces and cities most seriously affected by smog to ensure rules on fighting air pollution are being enforced.

China's government has announced many plans to fight pollution over the years but has made little obvious progress, especially in the country's north and northeast, where coal burning has driven the rapid growth in heavy industrial output. Enforcing rules has been a particular problem with growth-obsessed local governments and powerful state-owned enterprises often ignoring central government guidelines and even falsifying their emissions data.

The Environment Ministry said on its website that teams would from now until March visit Beijing and its surrounding regions, the Pearl and Yangtze River deltas, Chengdu, Chongqing and Urumqi, all parts of China which have smog problems. The teams will ensure that factories have installed the correct equipment to cut emissions of sulfur dioxide, that plants previously closed remain shut and that local governments are enforcing clean air policies, the ministry added.

Factories that have particular problems will have environment inspection teams permanently based on site and legal means will be used to punish companies with particular problems, it said.

Regional environment inspection teams who do not do their jobs properly will be prosecuted and the media will be used to name and shame the most egregious examples of pollution, the ministry added. The public will also be encouraged to report pollution problems to the ministry, it said.
**MEP Releases Some Details on Polluting Companies**

Information on 72 companies that were found to have committed serious environmental infractions was released by China's Ministry of Environmental Protection (MEP) on October 14th, after a special investigation was conducted in the first half of 2013. MEP's investigation revealed the companies had committed 91 environmental infractions, including excessive or illegal air pollutant emissions and wastewater discharges, failure to properly treat solid and hazardous waste and failure to pay pollution discharge fees in a timely manner.

Most companies have been ordered to rectify the violations, while three have been ordered to cease operation.

Companies found in violation included large state-owned enterprises (SOEs) such as PetroChina Co. Ltd., China Guodian Corp., and China Huadian Corp., the latter two which are leading power producers.

According to press reports, ministry officials said that although these large SOEs were found to have infractions, they generally had taken a leading role in environmental protection activities. MEP officials also said that it is getting more difficult to investigate illegal behavior as some businesses increasingly resort to discharging pollutants at night or on rainy days when it is difficult to monitor them. This is particularly a problem with wastewater discharges.

In the coming months, the MEP said it will launch a campaign to investigate violations of air pollution standards and also will address pollution emissions from pharmaceutical companies. The list of companies that will be closely monitored will be released in early 2014.

An announcement from the Ministry of Finance said that 5 billion Yuan ($821 million) has been earmarked to create a special fund for preventing and treating air pollution. The Finance Ministry said the regions eligible for the rewards were Beijing and its neighboring city of Tianjin, the provinces of Hebei, Shanxi and Shandong, as well as the Inner Mongolia Autonomous Region.

The awards would be made at the end of the year and would be determined by pollution reduction targets, investment in tackling the problem and falls in PM 2.5 particles the ministry said on its website.

The provinces of Shanxi and Inner Mongolia are among China's top coal-producing provinces and have been a major source of air pollution.

**NDRC Increases Subsidies for Coal-Fired Units Using Cleanup Technology**

Coal-fired power producers in China that install and operate desulfurization and denitrification technologies to reduce air pollutant emissions will be given subsidies, the National Development and Reform Commission (NDRC) announced on October 15th. A subsidy of 0.01 Yuan ($0.002) per kilowatt-hour produced will be given to producers that meet the denitrification requirements as verified by the Ministry of Environmental Protection. A subsidy of 0.002 Yuan per kilowatt-hour will be given to those that meet desulfurization criteria of reducing dust and soot concentrations below 30 milligrams per cubic meter, or below 20 milligrams per cubic meter in designated critical air pollution control areas.
The NDRC also said it is reducing the on-grid price paid to coal-fired power producers across the country except in the provinces of Sichuan and Yunnan, on average from 0.025 ($0.004) to 0.009 Yuan ($0.0015) per kilowatt-hour, to reflect dropping coal prices.

Due to higher global prices and local shortages, on-grid prices paid to producers of natural gas will be raised in Shanghai municipality; in the provinces of Jiangsu, Zhejiang, Guangdong, Hainan, Henan and Hubei; and in the Ningxia-Hui autonomous region, according to the NDRC, which added that specific provincial pricing policies would be set soon.

**Sinopec to Spend $5 Billion on Cleaner Fuel Upgrades Annually**

China's dominant refiner Sinopec, or China Petroleum & Chemical Corp, expects to spend Yuan 30 billion ($4.9 billion) annually over the next few years to upgrade its refineries to produce cleaner oil products, the company said. China is transitioning towards using gasoline and gasoil with lower sulfur content. It aims to move entirely to National Phase IV-compliant gasoline, which limits sulfur levels to 50 ppm, from the start of next year, while Phase IV-compliant diesel will be implemented from the end of 2014.

Sinopec has set an internal deadline for all its refineries to start producing Phase IV-compliant gasoline by this month. It has 34 refineries in China, with total primary distillation capacity of 261 million mt/year (5.24 million b/d) at the end of last year.

Current Phase III fuel standards limit sulfur levels to 350 ppm for gasoil and 150 ppm for gasoline. Eventually, the government wants to move to Phase V standards, with 10 ppm sulfur, by 2017.

Sinopec said it has invested more than Yuan 200 billion over the last 10 years on fuel upgrades. Its investment in emissions mitigation and environmental risk management will total Yuan 22.87 billion over 2013-2015, Sinopec said.

The company reported total capital expenditure in refining of Yuan 32.2 billion, while spending during the first half of this year was Yuan 7.7 billion, mainly for upgrading oil product quality and revamping projects to process lower-quality crude oil.

**Shanghai To Reduce PM2.5 20% By 2017**

Shanghai has unveiled its Clean Air Action Plan, which aims to reduce the concentration of PM2.5 by 20 percent from the 2012 level by 2017. The plan, introduced in China's most populous city with nearly 24 million residents including 173,000 foreigners, included targets for pollution prevention in six sectors — energy, industry, transportation, construction, agriculture and social life.

"The frequency of heavy pollution will be significantly reduced by 2017. The air quality will better meet residents' expectations as well as the general qualifications of building an international metropolis," said Wu Qizhou, deputy director of the Shanghai Environmental Protection Bureau.

One of the highlighted measures in the Shanghai plan is forbidding coal burning, Wu said. More than 2,500 boilers and 300 industrial furnaces that use coal will be closed down or shifted to clean energy by 2015. Coal firing will be completely banned in 2017, the plan said.

The distribution of natural gas will be accelerated as well as the development and utilization of wind, solar and other renewable energies.
In the industrial field, the authority will adopt more stringent emissions control and elevate the threshold of industry access with regard to emissions standards in chemical engineering, shipbuilding, printing and dyeing. The Shanghai Commission of Economy and Information is revising the guidance for industries and working on a list of the industries that are encouraged, limited and those that should be eliminated.

"The restrictions on high pollution enterprises won't bring pressure to the city's economic development. Our policy is to make room for businesses that bring benefits economically and environmentally," said Zhou Qiang, secretary-general of the Shanghai Commission of Development and Reform.

The construction of a green traffic system that gives priority to public transport will also be carried out. Research by the Shanghai Environmental Protection Bureau showed that traffic contributes to 25 percent of nitrogen dioxide and PM2.5 in the municipality. "In 2015, the use of public transportation will reach 50 percent in downtown districts," said Pei Xiao, deputy chief engineer of the Shanghai Urban-Rural Construction and Transport Commission.

Vehicles will be restricted on the roads and schools closed on days when there is heavy smog in Shanghai China Youth Daily reported. The city in April drew up the emergency plan for days of heavy pollution, drafting a range of policies including banning more cars from the roads when there is severe air pollution, Wu told the newspaper.

It will also weed out the remaining 180,000 highly polluting (yellow label) vehicles from its roads by 2015 and implement National Standard V, equivalent to the European standard V, for emissions from all buses by the end of this year, the report added.

Vessels will also be required to use first-rate fuels to curb pollutants because Shanghai is a global port, Pei added. The transportation authorities will also promote the construction of "green harbors" and encourage boats to use power from shore and clean fuel products.

About 5,000 more charging stations for electric vehicles will be built.

The measures in the energy sector will emphasize controlling gross energy consumption and improve energy structure.

The city will also promote environment-friendly buildings, enhance ecological cycle in agricultural development and control agricultural pollution. Meanwhile, 4,600 hectares of greenbelts will be built according to the plan.

Traditional indexes tracking sulfur dioxide, nitrogen oxides and respirable particulate matter (PM10) in the air showed a trend of improvement, with the concentration of the three materials in ambient air in 2012 decreasing by 58, 15 and 19 percent, respectively, from 2007, thus meeting the goal of air quality improvement plan for the last five years.

The municipal government will establish an accountability system toward relevant departments and officials with a focus on air quality improvement and carry out annual assessments.

Statistics from the Shanghai Environmental Protection Bureau showed the average PM2.5 level in Shanghai from June 2012 to June 2013 was 56 micrograms per cubic meter. The level was high compared with international levels, experts said, but outmatched the national standard, 75.
“Shanghai needs to take other places in the Yangtze River Delta region into account for its pollution control plan. Joint efforts between the regions are necessary, and the measures should be synchronized,” said Qian Hua, director of the research institute of atmospheric environment under the Shanghai Academy of Environmental Sciences.

Shanghai has its own emergency response system in place to deal with air pollution that would see school, factories and construction sites closed when the air turns toxic. The city has a two-tier system in place to gauge the severity of air pollution. An Air Quality Index between 201 and 300 is the first level while AQI surpassing 300 is the second level, where pollution is considered serious.

When the air quality index reaches or is forecasted to reach the second level, the city government will enforce the emergency response program, according to Wu. It would mean shutting down schools, factories and construction sites and limiting vehicular traffic on the roads. Wu said the city’s air quality index has never reached the dangerous second level since the system was adopted in March.

**China Reports Drop in Major Pollutants Emissions**

Emissions of four major pollutants in China saw a year-on-year decrease of 2 to 3 percent in the first half of 2013, according to the Ministry of Environmental Protection. According to a recently released ministry report Chemical Oxygen Demand, a measure of organic pollutants in water, stood at 11.993 million tonnes in the first six months, representing a 2.37-percent drop year on year.

Emissions of sulfur dioxide in the same period dropped 2.48 percent from the previous year to 10.569 million tonnes.

Meanwhile, the ministry said, the total volume of ammonia nitrogen emissions was 1.259 million tonnes and nitrogen oxide emissions totaled 11.675 million tonnes, registering year-on-year decreases of 2.15 percent and 3.02 percent, respectively.

The report cited strengthened emission reduction projects and policies to encourage denitrification operations, revealing that denitrification facilities with a combined capacity of 150 million kilowatt-hours will have been newly installed by the year end.

According to the report, the ministry will soon issue more measures on various aspects including the electricity price evaluation of coal-fuelled generators and waste emission limits for construction projects. In addition, the ministry vowed to urge companies to solve environmental problems and promote advanced emission reduction technology and management methods.

**Environmental Protection Amendment Not Put To Vote after Third Reading**

China's top legislature has decided not to vote on a draft amendment to the environmental protection law after a third reading, as legislators called for harsher actions to protect the already heavily polluted environment. At a plenary meeting legislators passed a revision to the law on consumer rights and interests, but the environmental protection law draft amendment was not brought to a vote. The plenary meeting was held as part of a bi-monthly session of the Standing Committee of the National People's Congress (NPC), China's top legislature.
Legislators were not satisfied with the current version of the draft amendment, calling for stricter measures and more government obligations, as China is facing an increasing number of environmental issues after decades of rapid development.

Compared with the version that was tabled for the second reading in June, the latest amendment increases the weight of environmental protection in evaluating government performance. According to the current version, governments should view environmental protection work as a criterion when evaluating related departments, governments, and officials at lower levels.

Lyu Zushan, a member of the NPC Standing Committee, said at a group deliberation that implementation of energy conservation and emission reduction has not been satisfactory, which has put heavier pressure on the environment.

Lyu said that because many pollution issues cannot be solved by environmental protection authorities alone, there should be rigid measures to restrain governments, rather than just enterprises, from developing projects while overlooking environmental protections. He added that environmental quality data should be more transparent for the public, and the law should clearly define how to improve transparency.

Wu Xiaoling, another member of the NPC Standing Committee, said that although the current version of the draft amendment expands the range of subjects of public interest litigation on environmental issues, the range should be expanded further and non-profit organizations should be encouraged to seek litigation on environmental issues. By promoting public interest litigation, the public's appeal for a better environment can be addressed through rule of law, instead of resorting to mass incidents. China has faced increased mass incidents over environmental issues in recent years. Citizens in some cities took to the streets against paraxylene projects, which they believed to be a threat to the local environment. Those projects were later suspended.

The Law Committee of the NPC said in a report that the draft amendment will be further improved after collecting opinions from senior legislators and related departments during the session.

The law has not been revised since it took effect in 1989. Ji Bingxuan, vice chairman of the NPC Standing Committee, said finishing the amendment is extremely urgent in order to respond to the call of the people.

This is the third time that the draft amendment has been deliberated by legislators since its first reading in August last year. It is quite rare in China for a law or amendment not to be passed after three readings. Another such rare case was the property law, which was finally passed in the fifth session of the 10th NPC in March 2007 after eight readings.

**Beijing Discusses Ban on Idling Motor Vehicles**

Beijing needs to adopt a compulsory vehicle idling ban to combat the hazardous air pollution in the capital, according to Li Kunsheng, an official in charge of vehicle emission management with the Beijing Municipal Environmental Protection Bureau.

"In public spots, such as areas surrounding hospitals, schools and shopping malls, the driver would only be allowed to have the engine on for three minutes, otherwise a penalty would be given," Director Li said at a public hearing.
The hearing discussed a proposal that encourages drivers to turn their engines off after their cars have been idling for three minutes, with the nine delegates attending the meeting all supporting the proposal. It says running engines while a vehicle is not moving is an "inefficient use of fuel" and results in the emission of gases that have a "negative effect on both air quality and public health".

According to a study conducted by Beijing Jiaotong University, the emissions of PM2.5 - tiny particulate matter considered the most harmful to health - is at least five times higher when idling than when moving at even speed.

Researchers found 1 million idling vehicles can emit 1,000 metric tons of particulate matter into the air every year, according to Li.

He said the proposal to encourage less idling is far from enough to tackle the smog problems in the capital, where 14 days in September were shrouded in smog, more than three times the average in the past two decades, but legislation would have a better effect within a short period.

Studies show that car exhaust is a major source of air pollution in big cities like Beijing, contributing about 22 percent of the fine particulate matters in the capital's air, according to the Ministry of Environmental Protection. "Facing such severe air pollution, any measures cutting emission are worth a try," Li said.

Li Xiaoxi, a retired teacher of the Air Force Command College of the People's Liberation Army, strongly supported the legislation, while expressing worry about the enforcement of such a ban. "It takes time from proposal to legislation and maybe we can start with government cars, which should set an example to private car owners," she suggested. She said government cars always keep their engines running for hours, while waiting for officials or on patrol.

Zhou Ke, a law professor at the Renmin University of China, agreed that passing legislation is a long process, and suggested the ban should start with buses and taxis. "We could draw up a vehicle idling ban regulation for professional drivers such as bus and taxi drivers first and integrate it into the training of new drivers. After a one-year promotion, the legislation will be easily accepted by the public," Zhou said.

However, some delegates didn't think a compulsory ban is feasible. "Beijing has more than 5 million vehicles. It is almost impossible to calculate how many minutes a car's engine is on when not moving," said Xiao Yaping with the Beijing Automotive Research Institute.

Besides the difficulty of enforcement, Yang Yanqiu, a Beijing resident, had other concerns. "What if there is a patient inside the vehicle in summer or winter - without air conditioning, his or her health might be endangered," Yang said, adding many other conditions must be considered.

Gao Peng from Jinyinjian Taxi Company said taxis with passengers inside should not obey such a ban.

Huang Fei, a Beijing resident who has been driving for decades, said constantly turning engines off and on may cause safety issues.

With all these suggestions, Li Xiaojuan, deputy director of the commission of legislative affairs under the Beijing Municipal People's Congress, said amendments will be made in the proposal, which is an item of a draft regulation on preventing and tackling Beijing's air pollution. The draft
regulation will be discussed in November for the third time and the final result will come out in January, Li said.

Beijing is not the first city to come up with such a proposal. Zhuhai, a city in Guangdong province, issued a car idling ban in 2009, ruling that drivers who do not turn their engines off in public spots such as hospitals and schools will receive a penalty of up to 200 Yuan ($33).

Authorities in Shenzhen of Guangdong and Chongqing are also discussing car idling bans.

**Beijing to Ban Half of Private Cars on High-Pollution Days**

Beijing will ban half of its private cars and 80 percent of public vehicles from the roads if a red alert is issued on days of persistent pollution, the capital's information office announced. Private vehicles will be barred from using the roads, based on odd and even license plate numbers, when pollution is predicted to linger in the city for three or more days.

It is estimated that the public transport system will have 2 million more passengers on an emergency day, Fang Ping, deputy director of Beijing Municipal Commission of Transport, told a press briefing. This requires additional buses, trains and trams. Public transport will be extended by 30 minutes to cope with the pressure, said Fang Ping.

"Halving the number of private cars on the roads will greatly help to reduce pollution over a short period," Fang Li, spokesman for the Beijing Environmental Protection Bureau, said at a news conference.

The authorities have blamed vehicle emissions for being a major source of PM2.5 — fine particulate matter measuring 2.5 microns or less in diameter that can enter the respiratory system.

The emergency plan, based on experience in foreign countries, has a warning system comprising blue, yellow, orange and red alerts. It will take effect whenever the air quality index is predicted to be above 300 for three consecutive days, the information office said.

All freight vehicles and those transporting material for construction sites will be barred from the roads when the red alert is issued, while more watering carts and sprinkler trucks will take to the roads. However, vehicles for police use, emergency work, fire control, rescue work, long-distance transport, postal services, tourist services, school transport, landscape maintenance and public transport will not be barred, the authorities said.

Other measures, including a ban on outdoor barbecues and fireworks, are included in the emergency plan.

Kindergartens and middle school classes will be halted on days of high pollution to protect students' health.

The government will give 24 hours' notice of the emergency measures, Fang said. The city's environmental protection and meteorological bureaus will jointly predict the air quality based on weather conditions and emission levels. "We need to come up with accurate predictions, as the alerts are closely related to public life," Fang said. "We are confident the pollution predictions will be as accurate as the weather forecast."
Responding to the smog that enveloped the northeast of the country recently, leading to suspension of school classes and disrupting flights, Fang said it was partly related to the heating in buildings and adverse meteorological conditions that make it difficult for pollutants to disperse. "However, the key still lies in the reduction of emissions in the long term," he said.

**Study Shows Smaller Particles Most Harmful**

A recent study led by Chinese scientists shows a strong link between smaller air pollution particles and a range of serious health conditions. Scientists said the smaller the airborne particles, the more likely they are to cause illness, suggesting the need for monitoring of particulate matter of 1 micron or less in diameter — a category of pollution rarely monitored.

In recent years, many locations across the country have been blanketed with heavy air pollution, raising concerns for public health. Among the main categories of pollutant measured is PM2.5, which can enter the respiratory system and contribute to a range of illnesses, including cardiovascular disease. Now, in this new study published in the public health journal Environmental Health Perspectives, researchers from the School of Public Health at Fudan University in Shanghai have demonstrated correlations between PM2.5 pollution and the incidence of particular illnesses.

Researchers spent about two years collecting data in a medium-sized city in northern China, measuring the levels of particulate matter in 23 size categories ranging from 0.25 microns to 10 microns. They then plotted the health conditions of residents in the city against the concentrations of particles of different sizes found in their locations.

Among the key findings was that those areas with larger concentrations of smaller particles showed higher incidences of particular illnesses. "Our study, based on epidemiological investigation, showed that fine particles in the air measuring between 0.25 to 0.5 microns in diameter have a closer relationship to human health, especially an increased risk of cardiovascular diseases," said Kan Haidong, a professor at the School of Public Health at Fudan University.

The fine particles measuring between 0.25 to 0.5 microns in diameter accounted for about 90 percent of the total number of particles found in the air during the study.

Kan said the smaller the particle, the higher the concentration in any given volume of air and so the greater the number of particles coming into contact with tissues inside the human body. "Besides that, there may also be a relationship with the settlement of particles of different diameters in the lower respiratory tract." Kan said.

Kan said the smaller particles can also pass through the blood-air barrier in the lungs, entering the blood as toxins, and causing cardiovascular disease. Larger particles are not able to pass through the blood-air barrier so easily. He also said that smaller particles in the body can harm the regulation of the human nervous system.

Among the conclusions of the research is that the smaller the particle size, the more danger the pollution poses to public health, suggesting that more research is needed on PM1 pollution — particles of 1 micron or less in diameter.
"The significance of the study is that it has provided a new direction for the prevention and control of atmospheric pollution," Kan said. "What we need to focus on is particles of smaller sizes, rather than PM2.5."

Some scientists have already suggested more studies on PM1 pollution, citing its potential role in causing illness on a large scale. "In Shanghai, for example, about 80 to 90 percent of the mass concentration of the city's PM2.5 is PM1. So it would be more effective to carry out studies on PM1 than PM2.5," said Yang Xin, professor at the Department of Environmental Science and Engineering at Fudan University. PM2.5 is the main category of pollution monitored by government departments.

Yang said he has already approached government departments on the environment and related fields to suggest monitoring of PM1 levels, but he has yet to receive a response.

52. Hong Kong Welcomes China's Air Pollution Measures, To Curb Emissions Too

The Hong Kong government welcomed China's new measures to reduce air pollution on the mainland. Some of the measures adopted by China are directed at the Pearl River Delta region, a region where Hong Kong can contribute under the "One Country, Two Systems" principle through the “A Clean Air Plan for Hong Kong,” which will provide a good base to strengthen collaboration with Guangdong Province and Macau.

Just like China, Hong Kong reiterated that it too has already imposed stringent emission caps on its power plants, which has resulted in the significant reduction of pollutant emissions. In addition to the already imposed emission caps, Hong Kong plans to conduct a review of the fuel mix for power generation to strike a balance among the energy policy objectives of safety, reliability, affordability and environmental protection. The region will also mandate the use of cleaner marine fuel for local vessels and for ocean-going vessels to switch to a cleaner fuel.

Hong Kong officials will reduce the cap on the sulfur content of bunker fuel to 0.5 percent for vessels in Hong Kong waters starting in January 2015, according to press reports. The Environmental Protection Department (EPD) plans to submit the proposal for the 2013-2014 legislative session. Vessels are now permitted to operate in the waters using fuel with as much as 3.5 percent sulfur content, while marine gasoil of no more than 1.5 percent sulfur is required at berthing.

The EPD had considered limiting sulfur content to 0.1 percent, and it was not clear why it chose to pursue the 0.5 percent level instead.

Hong Kong also plans to reduce the cap on sulfur content for coastal vessels in its waters from 0.5 percent to 0.05 percent. "For local marine trades, we completed in January 2013 a technical study, which confirmed the technical feasibility of tightening the sulfur content of local marine diesel from 0.5% to 0.05%," EPD said. That proposal could be implemented in early 2014.

Companies including Maersk Line had pushed Hong Kong to shift from a voluntary scheme to reduce emissions, arguing that abiding by the limits put them at a competitive disadvantage.

Hong Kong has also recently made plans to use zero emission buses to improve air quality and reduce air pollution in the region.
53. Japan Revises Regulations to Accommodate Fuel Cell Vehicles

Japan's Ministry of Economy, Trade, and Industry has amended ordinances and regulations to better accommodate hydrogen fuel cell vehicles as the country's automakers gear up for commercial production and launch of the zero-emission cars in 2015.

Amendments effective on August 15th under the High Pressure Gas Safety Law allow the use of new materials in the making of filling station storage tanks, the ministry said. The new materials use carbon fiber blended with resins to produce a liner that allows hydrogen to be stored at 82 megapascals (MPa), a significantly higher pressure than in traditional tanks. Such high-pressure hydrogen is needed for extending the driving distance of fuel cell vehicles.

In a related step, the ministry in May revised regulations on high pressure gas container safety to allow vehicle tanks to use hydrogen gas at pressures of up to 70MPa. The previous tolerance level was 35MPa.

Hiroyuki Oda, the officer in charge of hydrogen gas safety at the ministry's Office of High Pressure Gas Safety, told the press that the changes are consistent with a new global technical standard governing the safety of hydrogen fuel cell vehicles. The standard was adopted at a June meeting in Geneva of the United Nations' World Forum for Harmonization of Vehicle Regulations.

Japan has fewer than 20 hydrogen fueling stations, all of them in major urban areas. METI has an informal target to have at least 100 stations operating by the end of 2015 and has said it will continue extending government subsidies to encourage their construction. In Japan, building one hydrogen station costs roughly five times the cost of a gasoline station.

Global automakers are racing to develop fuel cell vehicles as an alternative to fossil fuel-powered vehicles. Toyota Motor Corp. is offering its fuel cell technology to the German automaker BMW. Honda Motor Co. is cooperating with General Motors Corp. on a project to make fuel cell-powered vehicles a cost-effective alternative to gasoline-powered cars by 2020. Nissan Motor Co. and its Renault group are developing fuel cell vehicles in conjunction with Ford Motor Co. and Daimler.

Toyota and Honda have proven that a fuel cell vehicle with a 70MPa hydrogen tank can be driven more than 500 kilometers (311 miles) per fill. Oda said that this was one reason why the ministry is accelerating the development of hydrogen distribution infrastructure and related safety standards and tank specifications.

54. Solid Particles From Outside Add To Pollution in Delhi Air

A recent study by Indian Institute of Technology, Delhi, has found that the city's emissions, though considerable, are not alone responsible for the sudden peaks in particulate matter (PM 10) levels in it. Far-off sources in north India or even beyond India (within Asia) may be contributing as much as 24% of PM 10. And on days when PM 10 concentration is very high here, only about 11% of it may have been contributed by polluting sources within Delhi.

The study, published online in the Atmospheric Research Pollution journal, has used a chemical transport model to interpret Delhi’s PM 10 levels from June 2010 values to assess how much of it was caused due to emissions within the capital. The data was mapped on four geopolitical domains—Asia, India, north India and Delhi.
The team found that contribution from sources in Delhi alone was about 11% to 41% and a major proportion (59% to 89%) was from sources outside Delhi. While this may seem like a wide range, it was found that, on days when PM 10 concentrations were low in Delhi, the contribution from sources within Delhi was higher (41.5%). But on days when PM 10 concentration was very high (over 500 micrograms per cubic meter), the contribution from Delhi was only about 11%, from north India and surrounding areas about 69.2%, and from outside India about 19.6%.

The study, however, doesn't focus on specific areas outside Delhi affecting its air quality. "We will assess the sources in another study. These are likely to be areas with large thermal power plants and big polluting industries," says Manju Mohan, professor at Centre for Atmospheric Sciences, IIT Delhi, who co-authored the study with PhD scholar Medhavi Gupta.

"Sudden peaks in PM 10 levels cannot be due to domestic sources. The peaks are a result of polluants traveling from a long distance. It may take up to a couple of days for polluting particles from outside to reach Delhi," adds Mohan.

Experts say the findings indicate that we need strict pollution norms for the entire region. "Delhi is already contributing to a huge amount of air pollution which needs to be mitigated. Along with that, we need similar strict norms for all cities and towns. That is why we are talking of an air pollution action plan for NCR and not just for Delhi. Even towns like Meerut should have the same norms," says Anumita Roychowdry, Executive Director-Research and Advocacy, Centre for Science and Environment.

55. Coastal Cities in Asia Most at Risk from Natural Disasters, Study Says

Coastal cities in Asia are most at risk of catastrophic flooding, storms, storm surges, earthquakes or tsunamis and thus great physical and economic harm, according to a study by a Swiss insurance company. The study, "Mind the Risk: A Global Ranking of Cities Under Threat From Natural Disasters," considered two major indicators of risk—the size of an urban population that could be hit by one or more natural perils and the possible impact on local national economies, calculated by the value of working days lost. Key results included:

- The Tokyo-Yokohama region topped all urban areas with the most people potentially affected, aggregated for all five perils at 57.1 million people, according to the study published on September 18th by Swiss Re, a Zurich-based reinsurance company.
- Manila ranked No. 2 with 34.6 million people potentially affected by all perils, and the Pearl River Delta in China ranked third with 34.5 million people potentially affected.
- Tokyo-Yokohama also led all urban areas on the value of working days lost for all perils—calculated as all days during which a certain percentage of the population cannot go to work.
- Manila ranked No. 1 in urban areas for the value of working days lost relative to the national economy for all perils.

The report evaluated the risk of flooding, storms, storm surges, earthquakes and tsunamis for 616 cities worldwide. Such natural disasters could cause infrastructure to break down, lives to be lost, and local and national economies to be disrupted, the report said. Of the natural disasters evaluated, river flooding posed the highest risk to the cities evaluated.
Results of the study could be used by decision makers, the insurance industry and the public “to promote dialogue on urban resilience,” a Swiss Re news release said. “We need to better understand what makes cities more resilient and what decisions about investments and infrastructure are needed to minimize the loss of life, property and economic production,” Matthias Weber, group chief underwriting officer at Swiss Re, said in the release.

Swiss Re’s measurements considered not only how at-risk the locations were for natural disasters, but also how prepared each city was. For instance, while Los Angeles and Jakarta are both at risk of being affected by a “devastating earthquake,” Jakarta would lose 25 times more working days or productivity, a release said.

Additionally, while India and China had the most people exposed to flooding, Amsterdam-Rotterdam, Paris, Milan and London were poised to suffer a higher economic loss, the study said.

While Asia dominated the urban areas with the most people potentially affected, working days lost, and working days lost relative to the national impact, other regions were not immune to risk. Cities in Europe, North America, South America and the Middle East also appeared in the ranking of top 10 cities most at risk in various categories.

- Amsterdam-Rotterdam ranked No. 4 and No. 2 in most working days lost and most working days lost relative to national impact, respectively.
- Los Angeles ranked No. 9 and No. 6 in most people potentially affected (16.4 million people) and most working days lost, respectively.
- New York-Newark and San Francisco ranked No. 7 and No. 8, respectively, under cities for most working days lost.

56. Australian Government Axes Climate Science Body, Targets Other Agencies

One day after formally taking office, Australia's new conservative government abolished an independent body established to provide the public with information on climate change science. New Environment Minister Greg Hunt announced the axing of the Climate Change Commission on September 19th, fulfilling an election commitment of the Liberal-National Party Coalition government. Hunt said the move will help “streamline government processes” and the federal Environment Department will now be responsible for advice and analysis on climate change.

The coalition government is also committed to abolishing the Climate Change Authority, an independent body established to advise on emission reductions targets, and the Clean Energy Finance Corporation (CEFC). It also intends to repeal the carbon price scheme.

However, it must steer legislation through the new Parliament in order to abolish the two organizations and the carbon price scheme, and although Senate votes are still being counted, it is clear that the balance of power will be in the hands of so-called micro-parties. These are likely to generally favor the repeal measures, but striking a deal in the Senate could prove problematic, given the disparate interests that the balance-of-power senators represent.

In addition, it is not clear whether a majority of senators would agree to repeal before the coalition releases a much more detailed version of its alternative “direct action” climate policy. A policy framework on the approach released in early 2010 proposes few if any regulatory controls on
greenhouse gas emissions. Instead, it has as its centerpiece an “emissions reduction fund” that would distribute money to bidders that offer abatement of greenhouse gas emissions at the lowest cost.

Although the new government is seeking to halt investment activities of the CEFC as soon as possible, independent legal advice released by the Australian Conservation Foundation, said that a ministerial direction to the CEFC board to cease activities, investments or payments “would frustrate the legislative purpose of the CEFC Act, would be inconsistent with the CEFC Act and would not be authorized by s64(1) of the CEFC Act.”

The CEFC said it currently has an investment portfolio of A$554 million ($527 million) and every A$1 (95 cents) of CEFC investment has mobilized an average A$2.90 ($2.75) of private sector investment.

The CEFC has not yet announced some financing contracts it has already finalized, but has suspended decisions on new investments while it awaits formal discussions with the new government.

Meanwhile, the Climate Change Authority is scheduled in October to release its draft report recommending a 2020 emission reduction target for Australia, ahead of submitting its final report in February 2014. Although the coalition is committed to abolishing the authority, it remains to be seen whether it attempts to prevent it publishing its draft report and whether the authority would accede to any such request. The authority’s establishing legislation states that the minister must not give directions to the authority about the conduct of its reviews or the content of its reports.

The coalition is formally committed to making a 5 percent cut in emissions by 2020 from 2000 levels and has said it would make cuts of up to 25 percent depending on the actions taken by other countries. The Climate Change Authority’s advice is intended to provide guidance on a more exact 2020 target, given international developments.

57. INDIA: GM Emissions Violation “Corporate Fraud” - Report

General Motors committed a “corporate fraud” to make vehicles that violated emission rules and eventually forced the recall of 114,000 Chevrolet Taveras – a popular multi-utility vehicle – in India in July, a government appointed panel probing the issue has said in a report. The “fraud” was carried out with “full knowledge and complicity” of some of its top management, who were there between 2005-2012, the report, cited by the Hindustan Times, said as it recommended strong punitive measures against the automaker.

In July, GM India announced a recall of over 114,000 Taveras — one of the largest vehicle recalls in India to date — manufactured between 2005 and 2013 for failing to meet emission rules. Before announcing the recall, GM India had admitted in a letter to the government that its internal probe has found that company employees replaced non-compliant engines with those that were already approved and sent them for testing.

The company subsequently sacked several executives including its chief financial officer Anil Mehrotra plus officials in the US.

Separately, the government had ordered a three-member panel headed by Nitin Gokarn, CEO, National Automotive Testing and R&D Infrastructure Project (NATRIP) to investigate and fix
“culpability.” The Gokarn-panel, however, left it to the road transport ministry to fix the size of the penalty.

The panel has also recommended a host of measures to make testing of vehicles more stringent and scientific. This includes mandatory testing of vehicles to check conformity of production (CoP) at the production stage itself. This will ensure that vehicles are compliant with type approval parameters from the start. Presently CoP is done only annually.

The probe panel, however, did not find any role of either government officials or Automotive Research Association of India, the testing agency, in perpetrating the violation.

Apart from CoP test done at the automaker, the committee has recommended that it should also be done at the dealer as well. If the vehicle fails compliance 'norms', as they are referred to in India, type approval should be withdrawn.

“All vehicles related details (like chassis number, details of engine) should have to be logged by the manufacturer at the production stage into Vahan –the online national register of vehicles across India started by the road transport ministry,” said an official.

Also the annual production plan of models due for CoP should be submitted to the test agency a month before the testing is to be done.

GM India has restarted Tavera production.

58. India Sticks to Its Stand on HFCs

Resisting pressure from the US and other developed countries, India stuck to its stand of handling the HFC — climate-damaging refrigerant gas — issue under the United Nations Framework Convention on Climate Change (UNFCC) and requested the participating nations to remove the controversial subject from the agenda of the 25th meeting of parties (MOP 25) to the Montreal Protocol on its inaugural day in Bangkok.

Though the delegates from other countries agreed to retain the agenda item on proposed amendments to the Montreal Protocol, India refused to toe their line. Indian representatives, including senior officials from the ministry of environment and forests, are reported to have reiterated New Delhi’s stand arguing that the country would not be party to any change which defies the core of the UNFCCC and its Kyoto Protocol.

Officials said that New Delhi would first like to see the outcome of the Indo-US bilateral over the issue. Since the US is the prime mover of an amendment for addressing HFC under the Montreal Protocol, it's important to see what the country has to offer in terms of solutions (economically viable and safe technology) for its phase out, they added.

"We are not rigid. But, we'll have to see whether our industries are ready to move to alternatives that have low global warming potential," said an official, adding that New Delhi would not at all go for any costly alternative as the burden will ultimately be passed on to consumers.

Since HFC is not an ozone-depleting gas, it has been kept out of the Montreal Protocol that currently deals with phasing out ozone depleting substances like hydro-chlorofluorocarbon (HCFC) and chlorofluorocarbons (CFC). The HFC, however, contributes to global warming and
its phase-out comes under the Kyoto Protocol, which put the onus of its replacement on developed countries.

The US along with Canada and Mexico moved an amendment for addressing HFCs under the Montreal Protocol, arguing that the phasing out of the ozone-depleting substances has increased the use of HFC, which contributes to global warming.

India, however, refused to be part of it. If HFC comes under the Montreal Protocol, it would be binding on emerging economies, including India, to go for phasing it out in an agreed time-bound legal framework.

India has consistently maintained that the country will not phase out HFC unless there is availability of safe and economically-viable alternatives. New Delhi will go to the crucial climate conference in Warsaw next month with the same stand.

As the stalemate continues, the prominent Delhi-based policy and advocacy group Central for Science and Environment (CSE) urged the Indian government to agree to set up a "contact group" to discuss the management of HFCs where countries can turn in their submissions on how the Montreal Protocol should address control of HFC.

The CSE insisted that any move to shift HFC discussion to the Montreal Protocol should be agreed to by countries under the UNFCCC.

59. Tighter Emission Standards for In-Use Diesel Vehicles in Singapore

The National Environment Agency (NEA) has advised owners of diesel vehicles to get their vehicles inspected and serviced to meet tighter emission standards that will take effect on January 1, 2014. In a statement, NEA said it has been working closely with authorized vehicle inspection centers to alert owners whose vehicles show borderline results during the mandatory inspection.

Such inspections are made at VICOM, JIC Inspection Services or STA Inspection.

NEA also said a six-month grace period will be given for vehicles that show borderline test results, to give vehicle owners time to adjust to the higher standards.

The tighter emission standards were announced in the government’s budget debate this year. It requires all diesel vehicles in use in Singapore to have a smoke opacity test result of 40 Hart ridge Smoke Units (HSU) or lower from January 1, 2014. The current requirement is 50 HSU and lower.

The new requirement is part of efforts to keep the air in Singapore clean and safe.

Owners whose vehicles fail to meet the standard can be fined up to S$5,000.

Figures from NEA show that more vehicles are being fined for failing to meet the requirement — the number has gone up from 4,794 in 2011 to 6,381 in 2012. The figure for this year is trending high — for the first nine months, 5,809 vehicles failed to meet the requirement and the owners were fined.

60. Southeast Asian Leaders Approve Joint Monitoring System to Stem Haze
Leaders from the Association of Southeast Asian Nations (ASEAN) approved a joint haze monitoring system to identify fires such as those in Indonesia that led to hazardous pollution levels in Singapore and Malaysia this year. The system will involve the sharing of digitized land-use maps and concession maps of fire-prone areas that cause haze, according to an October 8th statement from the Singapore government. The data will be shared among the governments of Singapore, Malaysia, Indonesia, Brunei and Thailand.

Singapore and Malaysia have been plagued for decades by periodic smog caused by clouds of ash drifting from Sumatra, with regular spats over responsibility. Indonesia said in July it agreed to provide the governments of haze-hit neighbors with maps of plantation concessions in fire-prone areas, though only on condition that they're not made public.

Singapore Prime Minister Lee Hsien Loong suggested the city state along with Malaysia and Indonesia "explore new areas for trilateral cooperation which would help to address the root causes of the fires which cause the haze," the Ministry of Foreign Affairs and Ministry of the Environment and Water Resources said in the statement.

ASEAN “welcomed Indonesia’s commitment to ratify a regional haze agreement” and looked forward to its ratification at the earliest time, according to a statement released at the ASEAN summit in Brunei on October 9th.

Singapore's environment and water resources minister, Vivian Balakrishnan, had said maps of plantation concessions should be made public so that companies owning land can be punished. Concession data will be made available to the public only when there are court proceedings against companies charged with illegally burning and not before that said Agus Purnomo, a senior official at Indonesia’s presidential office.

MIDDLE EAST

61. Very Good Air Quality Levels on Yom Kippur Across Israel
Amit Steinbach, 10, and friends cycle down a deserted Ayalon Highway in Tel Aviv on Yom Kippur. Photo: Roni Steinbach

As cars disappeared from the roads and bicycles sailed through the highways instead, air quality levels were very good throughout Yom Kippur, the Environmental Protection Ministry reported.

The plunge in air pollution was particularly prominent in the big cities, places that are typically heavily affected by pollution from vehicles, the ministry explained. Such a noticeable improvement in these areas on Yom Kippur indicates the considerable effect that transportation has as the main source of air pollution there, the ministry said.

With the holiday the concentration of nitrogen oxides plunged, dropping by 92 percent in the Gush Dan region. Maximum measurements of nitrogen oxides reached 9 parts per billion during the holiday, compared to up to 116 parts per billion on the morning of the day before, the Environment Ministry said.

Jerusalem featured a 95% drop in nitrogen oxide levels, falling from 194 parts per billion to 9 parts per billion on Yom Kippur.

Haifa’s nitrogen oxide levels fell from 41 parts per billion at 6:30 a.m. the day before Yom Kippur to 8 parts per billion during the holiday, the ministry data said.

“We emphasize that the drastic reduction applies only to nitrogen oxides and not respirable fine particles, because the particles have a longer stay in the atmosphere – about 10 days – until they are removed from it,” the ministry said.

Nitrogen oxides penetrate deep into the respiratory tract, causing various symptoms of respiratory diseases and reducing the body’s response to bacteria. At low concentration, this can mean lung and eye irritations, but at higher concentrations, it can weaken the body’s defense systems, leading to illnesses such as pneumonia, the Environment Ministry said.

62. Israel's Air Pollution Prevention Plan to Boost Cleaner Fuels, Energy Efficiency

Israel’s National Air Pollution Prevention Plan approved by the Cabinet on August 25th will encourage operators of factories, buses, and taxis to use less polluting fuels; subsidize the replacement of energy-inefficient vehicles and appliances; and provide economic incentives for employees to carpool or use public transportation. It will also require the Israel Electric Corp. (IEC) to offer differential power rates encouraging electricity use at off-peak hours.

While the plan will cost the government 140 million shekels ($38.3 million) during the next four years, the Environmental Protection Ministry estimates it could simultaneously save the Israeli economy up to 8.8 billion shekels ($2.4 billion) by reducing pollution-related illnesses.

Its implementation—already 20 months behind schedule—will begin immediately.
The Clean Air Law, passed by the legislature (Knesset) in 2008, required the government to approve a national plan to reduce polluting emissions before the law came into effect, on January 1, 2012. The move was delayed by state budget cuts, the government said. The stalemate persisted despite court appeals seeking to compel the government to act.

By 2020, the plan aims to reduce nitrogen oxide emissions 60 percent, sulfur dioxide emissions 68 percent, PM-2.5 emissions 11 percent, and benzene emissions 85 percent, among other pollutants. It also sets a target for at least 10 percent of the country's electricity to be solar-generated by 2020.

In addition to Israel's large regional and national bus companies, sectors that will be affected by the new plan include companies with large car fleets for employee use, construction companies, taxi drivers, and stone quarries, among others, according to the Israel Chamber of Commerce.

The trade-in program could lead to a jump in imports of more energy-efficient vehicles and appliances, and create a niche for companies to collect, sort, transport, and recycle the discarded goods, a chamber official said.

Other main components of the approved program include:
• Pilot conversion of city buses to run on compressed natural gas;
• Tax breaks to encourage the use of hybrid taxis;
• imposing lower taxes on less-polluting types of gasoline;
• implementing Israel's first comprehensive examination of contaminants in homes and public institutions, such as cleansers, construction materials, furniture, and carpets; and
• reviving the Israeli version of a “cash for clunkers” program to encourage trade-ins of old, power-hungry vehicles and appliances for cash or discounted upgrades.

63. 'Green' Taxis Launched In Dubai as Part of Eco Drive

A fleet of 20 environmentally friendly taxis is hitting the roads of Dubai. The Toyota Camry hybrid vehicles have been added to Dubai Taxi Corporation’s fleet as part of a plan to reduce pollution caused by vehicle emissions.

Acting CEO of Dubai Taxi Ahmad Mohammed Al Hammadi said: “The Roads and Transport Authority (RTA) makes unremitting efforts to bring about a shift in the infrastructure systems of mass transit so that they are environmentally friendly, and meet the increasing demand for transportation in the emirate.”
The vehicles were launched (pictured) during an official ceremony at Al Wasel Auditorium at the headquarters of the RTA.

64. Abu Dhabi to Get Electric Buses in October

Abu Dhabi is to get zero-emission electric buses next month as part of the Department of Transport’s efforts to reduce pollution. Each bus runs on a battery and will be charged every morning at the main bus terminal near Al Wahda Mall.

The buses also have a “brake charging” feature, in which the battery will be gradually recharged every time the driver steps on the brake.

One bus, to be introduced in the third week of October, will run from Abu Dhabi Mall to Marina Mall, chosen because it is one of the longest and busiest routes.

Another bus will run from Abu Dhabi city center to Musaffah, a mixed industrial and accommodation section of the city. The regular fare will apply for each electric bus, which can travel about 200km before needing to be recharged, or up to 280km if the air conditioning is not used.

Saaed Al Hameli, director of the organizational development division of the Department of Transport, said the new buses are part of a plan to try alternative fuels. The department has already tested buses that run on gas and will give the electric buses a six-month trial, during which the public will be asked to fill out questionnaires on their performance.

AFRICA

65. DVLA to start Vehicle Emission Test in Ghana

The Driver Vehicle and Licensing Authority (DVLA) will soon start an emission test on vehicles in Ghana to ensure that vehicles emit acceptable levels of carbon. Dr. Bernice Adiku Heloo, Deputy Minister of Environment, Science, Technology and Innovation (MESTI), told the Ghana News Agency (GNA) in an interview that checking the emission levels of vehicles was part of the mechanism to reduce carbon emission. It is also part of the strategy of the Nationally Appropriate Mitigation Actions (NAMAs) to help Ghana mitigate the impact of climate change on citizens.

The Minister was participating in a workshop organized by the Ministry to educate participants on the Nationally Appropriate Mitigation Actions under a project dubbed "Facilitating Implementation and Readiness for Mitigation (FIRM)", supported by the United Nations Environment Program.
(UNEP). The FIRM project aims at strengthening national capacities to formulate low carbon development strategies and identify mitigation opportunities within the context of national sustainable development priorities and the evolving concept of NAMAs.

Dr. Heloo said vehicles that did not pass the emission test in Ghana would be assisted to get the right standards and that a Low Carbon Development Strategy (LCDs) would help Ghana quantify emission of Green House Gases per the key sectors. "We cannot relent now or in the future in our effort to mobilize all resources to address climate change challenges and equip local communities with the capacity to be resilient to climate change," she said.

The Deputy Minister said Ghana was committed to pursuing development options that would not increase its emission levels hence the NAMAs and the LCDs.

Mr. Bernard Abeiku Arthur, former Chief Executive Officer of the Centre for Urban Transportation, expressed belief that the Bus Rapid Transit (BRT) project was an option for an environmentally sustainable mode of transport. BRT is a project that seeks to improve mobility within the urban centers by encouraging people to park their personal cars and use public buses while promoting environmental sustainable transport mode. He said one of the objectives of the introduction of the BRT was to promote a shift to a more environmentally sustainable transport mode with lower emission.

Mr. Lennart Kuntze of the United Nations Environment Program said Ghana had a competitive advantage for developing renewable energy, saying, "There are favorable conditions for solar energy."

**GENERAL**

**66. Global Coalition Pledges to Scale up Efforts to Cut Short-Lived Climate Pollutants**

Government officials, company executives, and leaders of nonprofit organizations pledged at a convention in Norway on September 3rd to rapidly scale up their efforts to reduce short-lived climate pollutants such as black carbon. During a high-level assembly in Oslo, the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC) reinforced and expanded its commitment to 10 global initiatives, including efforts to cut methane and black carbon emissions. The coalition also stressed the importance of drawing more global investment toward the reduction of short-lived climate pollutants (SLCP) and the urgent need to prevent air-pollution-related diseases through action on such pollutants in a communiqué released after the meeting.

The coalition was established in February 2012 to encourage practical approaches and policies that target black carbon, methane, hydrofluorocarbons (HFCs), and other emissions that remain in the atmosphere for only a short time. Reducing short-lived climate pollutants could slow global warming by as much as 0.5 degree Celsius (0.9 degree Fahrenheit) by 2050, according to research by the U.N. Environment Program.

The coalition's membership spans governments, intergovernmental organizations, the private sector, the environmental community, and other members of civil society. The United States, Sweden, and UNEP were among its founding members.

“As founding members of the Climate and Clean Air Coalition, Sweden and the United States are pleased that the Coalition, as a complement to the work on long-lived climate pollutants, is already working to catalyze significant global reductions of short-lived climate pollutants.” President
Obama and Swedish Prime Minister Fredrik Reinfeldt said on September 4th in a joint statement from a meeting in Stockholm ahead of the Group of 20 summit.

Since its formation, the CCAC has grown to 72 partners, including 34 countries and 38 organizations across developed and developing countries.

Among the 10 initiatives discussed during the assembly, partner countries in the coalition agreed to adopt domestic approaches to encourage climate-friendly hydrofluorocarbon (HFC) alternative technologies and work toward a phase-down in the production and consumption of HFCs under the Montreal Protocol on substances that Deplete the Ozone Layer. “HFCs, potent greenhouse gases, have increased by approximately 8 percent per year from 2004 to 2008; without further action, these emissions are projected to accelerate rapidly,” the communiqué said.

The coalition also is helping partners integrate short-lived climate pollutant mitigation into national planning through new tools that identify which mitigation measures can bring rapid climate, health, and environmental benefits. The tools—which have been tested in pilot programs in Bangladesh, Colombia, Ghana, and Mexico—will be rolled out in additional countries, CCAC said.

To address the public health impacts of air pollution, the coalition said it will undertake “a global awareness-raising campaign on the urgent need to prevent air pollution-related diseases through action on SLCPs.”

More global finance for efforts to cut short-lived climate pollutants is needed, the coalition said.

CCAC pledged at its assembly to carry out the recommendations of an international methane finance study group that it commissioned. Another study group on black carbon finance will present its recommendations at the 2014 high level assembly.

While the coalition commended the efforts of its partner, the World Bank, to integrate short-live climate pollutants into its lending activities, CCAC urged regional development banks to join as well. From financial years 2007 to 2012, 7.7 percent of World Bank commitments, or about $18 billion, went toward “SLCP-relevant” activities in energy, transport, roads, agriculture, forestry, and urban waste and wastewater.

But more can be done, for example, to reduce black carbon emissions from bus- and rail-based transportation systems and cut methane emissions from rice irrigation and wastewater management, according to a World Bank report released at the assembly.

The CCAC is actively working to virtually eliminate fine particles including black carbon emissions from heavy duty diesel vehicles and engines by building an international movement to steadily reduce sulfur in diesel fuel, establishing more stringent vehicle emission standards, cleaning up fleets – especially in cities and at ports – and improving energy and environmental efficiency in the movement of global goods by developing a Green Freight initiative.

67. G-20 Countries Pledge To Reduce HFCs Through the Montreal Protocol

The United States and China led countries at the Group of 20 summit in St. Petersburg, Russia, in an agreement to use the Montreal Protocol on Substances that Deplete the Ozone Layer to reduce the production and consumption of hydrofluorocarbons (HFCs). The United States and China said in a joint statement that they will open formal negotiations for an amendment to the Montreal Protocol that would require countries to reduce their use of HFCs, which are highly
potent and rapidly growing greenhouse gases. Their negotiations will consider issues related to cost-effectiveness, financial and technology support, safety, and environmental benefits.

The negotiations will build on a June 8 agreement between President Obama and Chinese President Xi Jinping to phase down HFC emissions.

G-20 leaders said they would support efforts to address HFCs under the protocol that are “complementary” to ongoing negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) to develop by 2015 a global treaty to curb climate change. HFCs would still be subject to the reporting and accounting provisions under the UNFCCC and Kyoto Protocol.

The use of HFCs in air conditioners and refrigerators and as sealants has been accelerating since they were identified as replacements for ozone-depleting substances under the Montreal Protocol. HFCs do not deplete the ozone layer, but they have many times the global-warming potential of carbon dioxide, according to the Environmental Protection Agency.

Reducing HFCs would yield “enormous climate benefits,” cutting as much as 90 gigatons of carbon dioxide equivalent between now and 2050, or roughly two years of global greenhouse gas emissions at current levels, according to the White House.

China, India, and Brazil had been blocking a joint proposal by the United States, Canada, and Mexico to amend the Montreal Protocol since 2009, contending that use of HFCs should be curtailed through an international treaty on climate change rather than a treaty on ozone depletion.

The Montreal Protocol is an international treaty established in 1987 that targets the production of various substances known to deplete the earth’s ozone layer. The specifics of the agreement will be discussed at the next meeting of the protocol in October in Bangkok.

**68. Green Energy Pays For Itself in Lives Saved From Smog**

Switching to clean energy would pay for itself almost immediately, according to a new analysis, by cutting air pollution, saving lives and therefore money. The conclusion offers a strong incentive to countries to start cutting back on fossil fuels as soon as possible.

As well as releasing greenhouse gases that warm the planet, burning fossil fuels gives off large quantities of polluting chemicals. Jason West at the University of North Carolina at Chapel Hill, who led the analysis and colleagues have estimated how much air pollution would be reduced if humanity slashed its fossil fuel use. The team simulated global air pollution in 2030, 2050 and 2100, using two scenarios: one in which humanity cuts its greenhouse gas emissions fairly quickly, and a similar scenario with no global climate policy. Then, using the patterns of global air pollution, they calculated how many people would die as a result of smog, using real epidemiological data as a guide.

In each of the three future years selected, cutting fossil fuels saved lives compared with a control scenario. In 2030, 0.5 million premature deaths per year were avoided, and this rose to 2.2 million in 2100. Keeping these extra people alive means that they can work and continue to contribute to society.

West's team estimated that for every ton of CO2 not emitted, the average global benefit at any one time was between $50 and $380 depending on where you are in the world. In 2030 and 2050,
these benefits outweighed the cost of cutting emissions, which was less than $100 per ton of CO2. The calculations do not include pollution's effects on children or the costs of caring for people suffering from pollution-related disease, so the economic benefits are likely underestimated.

But the drop in air pollution, and its consequences, changes that equation. "This gives us a benefit that's immediate," says West, giving an incentive to act now.

The report is unique based on several factors, including its accounting for population growth and air pollution's ability to drift across country borders. "Past studies typically evaluated near-term and local co-benefits, neglecting the long-range transport of air pollutants, long-term demographic changes, and the influence of climate change on air quality," the authors write.

In contrast, the model used in the new report simulates "the co-benefits of global [greenhouse gas] reductions on air quality and human health using a global atmospheric model and consistent future scenarios, via two mechanisms: reducing co-emitted air pollutants, and slowing climate change and its effect on air quality."

According to West, China and East Asia have the most to gain health-wise by reducing air pollution, based on the report. "The benefits in North America and Europe are still pretty high, but in East Asia you have a very high population exposed to very bad air pollution, so there are lots of opportunities for improvement there," West said.

**69. UK Report: Advanced Biofuels Could Cut GHG Emissions for Less Than EVs**

A new study by Element Energy, commissioned by oil company BP, suggests that blending higher levels of sustainable biofuels into road transport fuels could cut Britain’s annual CO2 emissions by 27 per cent -or 12 million tons (Mt) a year by the end of the next decade.

Increasing the biofuel blends to 19 per cent from a current level of around 5 per cent would increase an individual’s annual fuel bill by just £13 by 2030; on a national basis the annual cost would be £336m compared to the annual cost of achieving the same 4 million ton CO2 reduction by using plug-in hybrid vehicles, £1.2bn.

That would mean that owner of the average car would see their annual fuel bill increase by just £13 if advanced biofuels became the sustainable fuel choice, while BEVs would come at annualized cost of £195 a year. This translates into costs of £95/tCO2 for biofuels compared to £170/tCO2 for battery-powered cars.

With combustion cars still expected to make up the majority of cars on the roads by 2030, advanced biofuels, made from cellulosic feedstocks, rather than food crops, could make bigger impact on the country’s GHG emissions. In addition, advanced biofuels could work alongside wider uptake of hybrids and plug-in hybrids, avoiding the issue of a technology ‘lock in’, according to the report.

Element Energy Associate Director Alex Stewart said: “In the long term, electric plug-in and fuel cell vehicles are likely to play a significant role in the transport mix. But we also expect high numbers of ICE-derived vehicles to still be in circulation by 2030, so lower carbon liquid fuels have to play a major part in meeting the UK’s CO2 targets.
“Biofuels also offer a more cost effective way to reduce emissions over the next 17 years, with a fuel premium of £336m in 2030 against the £1.2bn it would cost to achieve the same CO2 savings with plug-in vehicles.”

Element Energy’s ‘The Role of Biofuels Beyond 2020’ report looked at several biofuel blend levels to determine potential GHG emission savings and concludes that Europe needs to provide more policy support for advanced biofuels to help realize the potential of such fuels. Advanced biofuels include fuels produced from waste products such as wood chippings or algae biofuel.

70. Scientists More Convinced Mankind Is Main Cause of Warming

Leading climate scientists said they are now more convinced than ever that humans are the main culprits for global warming, and predicted the impact from greenhouse gas emissions could linger for centuries. The Intergovernmental Panel on Climate Change (IPCC) said in a report that a hiatus in warming this century, when temperatures have risen more slowly despite growing emissions, was a natural variation that would not last.

It said the Earth was set for more heatwaves, floods, droughts and rising sea levels from melting ice sheets that could swamp coasts and low-lying islands as greenhouse gases built up in the atmosphere.

The study, meant to guide governments in shifting towards greener energies, said it was "extremely likely", with a probability of at least 95 percent, that human activities were the dominant cause of warming since the mid-20th century. That was an increase from "very likely", or 90 percent, in the last report in 2007 and "likely", 66 percent, in 2001.

Compiled from the work of hundreds of scientists, the report faces extra scrutiny this year after its 2007 edition included an error that exaggerated the rate of melting of Himalayan glaciers. An outside review later found that the mistake did not affect its main conclusions.

The IPCC said some effects of warming would last far beyond current lifetimes. Sea levels could rise by 3 meters (9 feet, 10 inches) under some scenarios by 2300 as ice melted and heat made water in the deep oceans expand, it said. About 15 to 40 percent of emitted carbon dioxide would stay in the atmosphere for more than 1,000 years.

The IPCC said humanity had emitted about 530 billion tons of carbon, more than half the 1 trillion ton budget it estimated as a maximum to keep warming to manageable limits. Annual emissions are now almost 10 billion tons and rising.

Explaining a recent slower pace of warming, the report said the past 15-year period was skewed by the fact that 1998 was an extremely warm year with an El Nino event - a warming of the ocean surface - in the Pacific. It said warming had slowed "in roughly equal measure" because of random variations in the climate and the impact of factors such as volcanic eruptions, when ash dims sunshine, and a cyclical decline in the sun's output. And the report predicted that the reduction in warming would not last, saying temperatures from 2016-35 were likely to be 0.3-0.7 degree Celsius (0.5 to 1.3 Fahrenheit) warmer than in 1986-2005.

Still, the report said the climate was slightly less sensitive than estimated to warming from carbon dioxide. A doubling of carbon in the atmosphere would raise temperatures by between 1.5 and 4.5 degrees Celsius (2.7 to 8.1F), it said, below the 2-4.5 (3.6-8.1F) range in the 2007 report. The new range is identical to the ranges in IPCC studies before 2007.
The report said temperatures were likely to rise by between 0.3 and 4.8 degrees Celsius (0.5 to 8.6 Fahrenheit) by the late 21st century. The low end of the range would only be achieved if governments sharply cut greenhouse gas emissions.

And it said world sea levels could rise by between 26 and 82 cm (10 to 32 inches) by the late 21st century, in a threat to coastal cities from Shanghai to San Francisco. That range is above the 18-59 cm estimated in 2007, which did not take full account of Antarctica and Greenland.

71. Toyota Slashes Fuel Cell Costs by Nearly $1 Million for New Hydrogen Car

Toyota Motor Corp said it has slashed the cost of the fuel cell system in its next hydrogen-powered car by almost $1 million, putting it on course to launch a mid-sized sedan in 2015 with a price ticket below $100,000. The world's best-selling auto manufacturer and maker of the Prius gas-electric hybrid car says the fuel cell system will cost about 5 million yen ($51,000) compared with prototype costs of over $1 million. The company is betting on fuel cell cars, which convert hydrogen to electricity, emit only water vapor and have a similar range to conventional petrol-driven cars, as the next-generation alternative fuel vehicle.

"We aim to sell tens of thousands of fuel cell vehicles a year by sometime in the 2020s," Managing Officer Satoshi Ogiso told reporters in Tokyo where Toyota showed off its advanced technologies.

Toyota engineer Hitoshi Nomasa said the company had cut its use of platinum, which sells on world markets around $1,380 an ounce (28 grams), from around 100 grams in the fuel cell of its current hydrogen-powered SUV model to around 30 grams. The figure would come down more with improvements in platinum coating technology, Nomasa told reporters.

Diesel catalytic converters currently use some 20 grams of platinum, Nomasa said, adding: "If we can bring it down to around there, then that would be about the same level of platinum being used in cars that are widely used."

Toyota will also use less carbon-fiber in the high-pressure hydrogen tanks and will use more cheaper, mass-produced components to cut costs, the company has said.

Unlike electric cars, whose range is often limited to 100-200 km and which need hours to recharge, hydrogen vehicles can refuel within minutes and travel distances similar to those of autos with conventional combustion engines.

But for fuel cell vehicles to take off, hydrogen refueling infrastructure needs to be in place and the car price must drop.

Toyota currently leases around 100 fuel cell SUVs to governments and local authorities in Japan and the United States, though they are not available to the general public. The new fuel cell sedan will be sold in certain areas in Japan, the United States and Europe, Toyota said. It is set to unveil a concept model of the sedan at the Tokyo Motor Show in November.

Toyota is also working on a fuel cell vehicle system with Germany's BMW AG and has said it wants to introduce a new fuel cell vehicle around 2020 using the jointly developed technology.

72. IMF, World Bank Heads Lend Clout to Climate Change Efforts
At a panel on the opening day of their 2013 autumn meeting, IMF Head Christine Lagarde and World Bank Group President Jim Young Kim said climate change was a priority for their lending institutions, the first time the two had addressed the issue together in public. Lagarde said measures to reduce greenhouse gas emissions can add much needed revenue to national economies and steer countries toward the development of cleaner renewable energy.

"There are two things that they should focus on. One is get the (carbon) pricing right and we can help them with that," Lagarde said, referring to measures such as applying carbon taxes and establishing emissions trading schemes. "The second thing we can do is gradually phase out and remove the subsidies that apply to energies, and particularly fossil energies," Lagarde said. The subsidization of fossil fuels currently amounts to upwards of $485 billion, she said. The IMF published a report in March making the case for energy subsidy reform. The paper said that subsidies were expensive for governments, and that rather than helping consumers, they detracted from increased investment in infrastructure, education and health care which would help the poor more directly.

The IMF also plans to publish a report by mid-2014 providing U.S. policymakers with guidance on how to design a carbon tax within the context of broader fiscal reform and fiscal consolidation objectives.

Lagarde and Kim have put a brighter spotlight on climate issues at their respective institutions than their predecessors, stepping up efforts to reducing pollution in the absence of a global agreement on climate change. "We think a global agreement is critical but there are things we can do right now before we have an agreement that would make a difference," Kim said. Kim said the World Bank is focused on three major areas: ensuring sustainable energy for all countries, supporting low-carbon urban planning, and shaping "climate smart" agricultural programs.

"If we focus on those three areas, along with the effort the IMF is making on removing fuel subsidies, that's a robust response to this climate change problem," Kim said.

**73. Global Carbon Plan for Airlines Gets Initial UN Seal of Approval**

The United Nations' aviation agency approved the first steps toward a market-based approach to reducing emissions in the $708 billion airline industry. The International Civil Aviation Organization's assembly of nations, from the United States to Russia and the European Union, agreed on October 4th to complete a plan in the next three years for a market to start in 2020. The accord for airlines, responsible for 2 percent of greenhouse gas emissions worldwide, is unprecedented for a single global industry.

In a blow to the European Union, envoys gathered in Montreal declined to validate its plan to include international airlines in the EU emissions trading system prior to the start of the global program. Russia, Argentina and others rejected the offer from the 28-nation European bloc to scale back its carbon curbs in exchange for a global commitment to reduce pollution.

“While we would have liked more countries to accept our regional scheme, progress was made overall,” Connie Hedegaard, the EU Climate Change Commissioner, said in a statement. “We will now factor this in when, together with the member states and the European Parliament, we decide on the way forward with the EU ETS.” (See European Story Above)
How to regulate emissions from jetliners made it to the top of the ICAO agenda after the EU expanded its carbon market in 2012 to cover air carriers, a step that triggered objections from the United States, China, Russia, Brazil and other countries. Europe, which wants to lead the effort to cut greenhouse gases linked to climate change, has said its goal is to encourage an international solution to aviation pollution. The EU carbon market, the world's biggest, began operating in 2005 and allocates tradable emission permits to power plants, factories and airlines, which must surrender them to cover discharges.

The compromise deal proposed by ICAO assembly President Michel Wachenheim requests that the agency's 36-nation Council finish work on technical aspects and options for a global carbon market. The outcome will be reported to the agency's next triennial assembly for a decision. The resolution encourages nations to develop new aircraft technology, adopt carbon dioxide standards and use sustainable alternatives to jet fuels.

The assembly approved the deal hammered out by ICAO's executive committee, which voted on October 3rd 97 to 39, with nine abstentions, to remove a provision that would allow the EU to continue a limited market for carriers. Instead, the measure encourages member states to engage in talks on designing new carbon markets and implementing existing programs. The deal also initially exempts routes to and from developing states if their share of international civil aviation is less than 1 percent.

74. Oceans Face 'Deadly Trio' Of Threats, Study Says

A whale dives into sea off the coast of Greenland's capita

Photo: Alistair Scrutton

The world's oceans are under greater threat than previously believed from a "deadly trio" of global warming, declining oxygen levels and acidification, according to a new international study.

The oceans have continued to warm, pushing many commercial fish stocks towards the poles and raising the risk of extinction for some marine species, despite a slower pace of temperature rises in the atmosphere this century, it said.

"Risks to the ocean and the ecosystems it supports have been significantly underestimated," according to the International Program on the State of the Ocean (IPSO), a non-governmental group of leading scientists. "The scale and rate of the present day carbon perturbation, and resulting ocean acidification, is unprecedented in Earth's known history," according to the report, made with the International Union for Conservation of Nature.
The oceans are warming because of heat from a build-up of greenhouse gases in the atmosphere. Fertilizers and sewage that wash into the oceans can cause blooms of algae that reduce oxygen levels in the waters. And carbon dioxide in the air can form a weak acid when it reacts with seawater.

"The 'deadly trio' of ... acidification, warming and deoxygenation is seriously affecting how productive and efficient the ocean is," the study said.

Alex Rogers of Oxford University, scientific director of IPSO, told reporters that scientists were finding that threats to the oceans, from the impacts of carbon to over-fishing, were compounding one another. "We are seeing impacts throughout the world," he said.

Current conditions in the oceans were similar to those 55 million years ago, known as the Paleocene-Eocene thermal maximum, that led to wide extinctions. And the current pace of change was much faster and meant greater stresses, Rogers said.

Acidification, for instance, threatens marine organisms that use calcium carbonate to build their skeletons - such as reef-forming corals, crabs, oysters and some plankton vital to marine food webs. Corals might cease to grow if temperatures rose by 2 degrees Celsius (3.6F) and start to dissolve at 3 degrees (5.4F), the study said.

Scientists said the findings added urgency to a plan by almost 200 governments to work out a deal by the end of 2015 to limit a rise in average world temperatures to less than 2 degrees Celsius (3.6F) above pre-industrial times. Temperatures have already risen by about 0.8 degree Celsius (1.4F).

The report also urged tougher management of fish stocks including a ban on destructive bottom trawlers and granting more power to local communities in developing nations to set quotas.

**75. Diesel Exhaust Pollution May Disrupt Honeybee Foraging**

Exposure to pollution from diesel exhaust fumes can disrupt honeybees' ability to recognize the smells of flowers and could in future affect pollination and global food security, according to researchers. In a study published in the Nature journal Scientific Reports, scientists from Britain's University of Southampton found that the fumes change the profile of the floral odors that attract bees to forage from one flower to the next.

"This could have serious detrimental effects on the number of honeybee colonies and pollination activity," said Tracey Newman, a neuroscientist who worked on the study.

Bees are important pollinators of flowering plants, including many fruit and vegetable crops. A 2011 U.N. report estimated that bees and other pollinators such as butterflies, beetles or birds do work worth 153 billion euros ($203 bln) a year to the human economy.

Bee populations have been declining steadily in recent decades but there is scientific disagreement over what might be causing it. Much attention has been focused on whether a class of pesticides called neonicotinoids may be the culprit. A report from the European Food Safety Authority (EFSA) in January said three widely-used neonicotinoids, made mainly by Switzerland's Syngenta and Germany's Bayer, posed an acute risk to honeybees. EU leaders voted in April to ban three of the world's most widely-used pesticides in this class for two years because of fears they could be linked to a plunge in the bee populations.
But the British government, which recommended abstaining in a previous EU vote in March, argues the science is inconclusive and advises caution in extrapolating results from laboratory studies to real-life field conditions.

Guy Poppy, an ecology professor who worked with Newman, said to be able to forage effectively, honeybees need to be able to learn and recognize plants - a process their results showed could be disrupted by so-called NOx gases, particularly nitrogen dioxide, found in diesel exhaust and other pollution.

For their study, the scientists took eight chemicals found in the odor of oil rapeseed flowers and mixed them in one experiment with clean air and in another with air containing diesel exhaust. They found that six of the eight chemicals reduced in volume when mixed with diesel fumes, and two disappeared completely within a minute - meaning the profile of the chemical mix had changed. The odor mixed with clean air was unaffected.

When the researchers used the same process with NOx gases - nitric oxide and nitrogen dioxide - found in diesel exhaust emissions, they saw the same results, suggesting NOx is key to how and why the odor's profile was altered. When the changed chemical mix was then shown to honeybees - which are known to use their sensitive sense of smell to forage for flowers - they could not recognize it.

Giles Budge of Britain's Food and Environment Research Agency said Newton's study highlighted "a fresh issue to add to the many problems facing our insect pollinators". But he said that since the study was based in the laboratory, more research is needed to see if the problem is occurring in the wider environment.

76. U.N. Agency Classifies Air Pollution, Particulate Matter as Carcinogens

The International Agency for Research on Cancer (IARC) has classified outdoor air pollution and particulate matter as leading environmental causes of lung cancer deaths. The Lyon, France-based agency, which is linked to the United Nations' World Health Organization, said that based on a thorough review of the latest published international scientific evidence, it has concluded in separate studies that outdoor air pollution and particulate matter, a major component of outdoor air pollution, are group 1 carcinogens under the IARC classification system. Group 1 substances are deemed carcinogenic to humans.

It also noted a "positive association" between air pollution and an increased risk of bladder cancer.

The agency said the main sources of outdoor air pollution include land, air and sea transport, manufacturing industries, power generation based on combustion of fossil fuels, fuel burning and dust generation from agriculture, and home heating and cooking.

But it said outdoor air pollution is a complex mixture of substances. “There are several well-identified chemicals that can increase the risk of cancer and they have often been identified in occupational exposure settings. There are specific mixtures that all contribute to the complex mixture of air pollution, and they can also be attached to particulate matter,” Kurt Straif, head of the IARC monographs program, told reporters in a Geneva news conference.
Air pollution contains a mixture of cancer-causing substances. Heavy smog, rated as 'Hazardous' by the U.S. embassy air quality monitor, hangs over Beijing's central business district on June 7, 2013. UPI/Stephen Shaver

The agency said its evaluations show that the risk of lung cancer grows as exposure to particulate matter and air pollution rises. It cited estimates that ambient fine particles contributed to 3.2 million premature deaths worldwide in 2010, due largely to cardiovascular disease, and 223,000 deaths from lung cancer, more than half in China and other East Asian countries.

Low-income countries and those with high levels of polluting industries are at the highest risk for increases in air pollution-related cancer, but the agency's findings are valid for the entire world, said its director, Chris Wild. “Outdoor air pollution is, by definition, extremely widespread but our message is not completely hopeless: There are actions which can be taken,” Wild said.

The agency said its evaluation of air pollution, in volume 109 of the IARC Monographs series, is based on an independent review of more than 1,000 scientific papers from studies on five continents, including findings from large epidemiologic studies of millions of people living in Europe and North and South America.

Wild said classifying outdoor air pollution and particulate matter as carcinogens is a just a first step. “There are effective ways to reduce air pollution and this is not something restricted to a national level but it affects communities across national borders,” Wild said. “There has to be further emphasis to address this problem in terms of public health and policies across a wide number of sectors.”

Dana Loomis, deputy head of the IARC monographs program, said the most consistent associations of pollutants with lung cancer were for particulate matter contained in outdoor air, and the most extensively available data on air pollution pertain to these particles. “Over time, regulatory agencies responsible for air quality have focused more and more on fine particles,” he said. He said PM-2.5 (particulate matter with a diameter of less than 2.5 microns) “is of particular concern to regulatory agencies because they can be deposited deep in the lungs.” He cited high exposure levels for PM-2.5 in Asia, South Asia, eastern North America, and some places in Central America and Mexico. There are also areas of higher PM-2.5 concentration in Africa, indicating the presence of desert dust, he said.

IARC monographs do not make formal risk assessments, said Loomis, but “we can say that a person living in a polluted industrial city would have higher risk than someone living in a relatively unpolluted rural area.” Straif said “If you take all the published epidemiological studies together,
there is perhaps a 10-15 percent increase in lung cancer risk per 10 micrograms per cubic meter” of exposure.

Wild underlined that air pollution was not a primary cause of the disease. "We have well over a million lung cancer cases per year, the vast majority of which are actually due to tobacco, rather than I think around 10 percent, perhaps, which are to things like ambient air pollution," he told reporters.

The IARC said it had also conducted a separate evaluation of what is known as "particulate matter", classifying it as a Group 1 cancer cause. Particulate matter includes both solid particles and liquid droplets found in air -- such as soot -- which can penetrate deep into the respiratory system.

Beyond cancer, known health effects include coughing or difficulty breathing, chronic bronchitis, and premature death in people with heart or lung disease. In addition, such matter has environmental effects such as corrosion, soiling, damage to vegetation and reduced visibility due to haze.

**77. Global Treaty on Mercury Formally Adopted**

The UN treaty on mercury controls agreed in January has been officially adopted at a meeting in Japan but it will not enter force until it has been ratified by 50 countries. The treaty, known as the Minamata convention, introduces binding controls on mercury mining, use and emissions, and bans mercury from a range of products including fluorescent lighting and blood pressure monitors, and most batteries.

Together with the 2009 Hong Kong convention on ship recycling, it is one of the first new treaties on the environment and health for a decade.

More than 90 countries have signed the treaty at a meeting of parties to the convention but the ratification process takes longer. Some environmental treaties have taken many years to enter force.

NGOs have welcomed the treaty but warn of a number of weaknesses, especially on its treatment of mercury exports and emissions from coal-fired power plants. “The Minamata Convention leaves wide discretion for individual countries to set their own approaches, targets and timelines on key provisions,” said Baskut Tuncak, campaigner at the US-based Center for International Environmental Law. "This wide discretion leaves serious gaps and loopholes."

**78. Area of Antarctic Ozone Depletion Reaches Annual Peak**

The area of the annually recurring Antarctic ozone hole reached its peak at 24.0 million square kilometers on 16 September according to data from NASA. This is more than in 2012 and 2010, but less than in 2011.

The World Meteorological Organization’s newest Antarctic Ozone Bulletin said the ozone hole area averaged over the ten last days of September was 20.9 million km2 (data from the Royal Netherlands Meteorological Institute, KMNI). The ozone mass deficit averaged over the same period was 19.59 megatonnes. This is more than in 2010 and 2012 but less than in 2011.
As the temperatures rise after the southern hemisphere winter, the ozone depletion rate will slow down. It is still too early to give a definitive statement about the degree of ozone loss that will occur in 2013. Existing data indicates that this year’s ozone hole is larger than in 2012 and possibly also 2010, but smaller than the one of 2011.

The ozone bulletin is based on observations from the ground, weather balloons and satellites from WMO’s Global Atmosphere Watch Program and its network of scientific stations in some of the world’s most inhospitable terrain. Most stations reported clear signs of ozone depletion.

The meteorological conditions in the Antarctic stratosphere found during the austral winter (June-August) set the stage for the annually recurring ozone hole. The last ten days of September is typically the time period when the ozone hole reaches its maximum extent.

By most criteria, the largest ozone hole was observed in 2006. An international agreement banning the worst ozone depleting substances has stemmed the destruction of the ozone layer. However, severe Antarctic ozone holes are expected to continue during the next couple of decades.