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# CAR LINES

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## EUROPE

### 1. Air Pollution in UK Will Continue To Be a Killer, Government Admits

AIR pollution will continue to kill hundreds of people every year in the North-East for at least another decade, the Government has admitted. Ministers had predicted that European limits on deadly nitrogen dioxide – mainly from vehicle exhausts – would be achieved in the biggest urban areas by 2020. But officials are now warning that people in Teesside and Tyneside will be exposed to dangerous levels of the gas for a further five years.

Meanwhile, separate figures put the current number of “excess deaths” from nitrogen dioxide and other particulate gases across the region at 1,273 every year. They include significant numbers of deaths in Teesside, in Stockton-on-Tees (77), Middlesbrough (68), Redcar and Cleveland (61), Darlington (47) and Hartlepool (43). However, the highest number of people die annually in County Durham (223), followed by Sunderland (143) and Newcastle (124) and Gateshead (99).

Three years ago, the department for the environment, food and rural affairs (Defra) predicted that nitrogen dioxide targets would be hit in Teesside and Tyneside in this decade. Its assessment read: “The annual limit value is likely to be exceeded in 2010 and in 2015 but achieved by 2020.” However, revised estimates buried on Defra's website have put back that target until 2025 - blaming the delay on higher-than-expected emissions from diesel cars.

Diesel has replaced petrol in many cars – because it produces less carbon dioxide, blamed for climate change - but emissions of nitrogen dioxide are higher.

To the Government's embarrassment, the original deadline set by the European Union for meeting the limits was 2010.

Jenny Bates, of Friends of the Earth, said: “Failure to meet air pollution limits in our major cities would have serious impacts on the health of thousands of people. “These air quality rules should already have been met. Government and councils must make this issue an urgent priority and end this scandal.

“Rapid steps to ban the dirtiest vehicles and cut traffic levels must be taken - and road-building plans that will simply add to the problem should be abandoned.”

The EU's air quality directive sets a limit of no more than 40 micrograms of nitrogen dioxide per cubic meter of air that we breathe, as an annual average. But, according to the Defra figures, that figure will be 69 in Teesside in 2015 (Tyneside 68), falling to 47, in 2020 (Tyneside 46) and – finally – to 38, in 2025 (Tyneside 36).

The European Court of Justice will rule by the end of the year on what action Britain needs to take.

A Defra spokesman said: “As our understanding of nitrogen dioxide evolves this must be reflected in our projections, which is why we have revised these figures. “Work is under way to ensure compliance with EU limits in the shortest possible time.”

### **Number of Annual 'Attributable Deaths' Throughout Region (Age 25-Plus)**

County Durham	223
Darlington	47
Gateshead	99
Hartlepool	43
Middlesbrough	68
Newcastle	124
Redcar & Cleveland	61
South Tyneside	84
Stockton-on-Tees	77
Sunderland	143
Craven	24
Hambleton	34
Harrogate	68
Richmondshire	17
Ryedale	23
Scarborough	56
York	82
Total	1,273

Data from Britain's Department for Environment, Food and Rural Affairs (Defra) showed that only five out of the country's 43 pollution zones will comply with EU limits on NO<sub>2</sub> levels by 2015, and three zones - Greater London, the West Midlands and West Yorkshire - will not comply until after 2030.

Lawyers representing the European Commission told the European Court of Justice (ECJ) on Thursday that the case was "a matter of life and death" and "perhaps the longest-running infringement of EU law in history." The ECJ will make a final ruling by the end of the year on what action Britain needs to take, which will also be binding for all EU national courts. The case will then go back to the UK Supreme Court next year for its final judgment.

Britain has a particular problem with NO<sub>2</sub>, but the Commission is taking action against 17 other member states - including France, Germany and Sweden - for breaching limits for particulate matter, another harmful pollutant.

## **2. Ricardo Presents Brighton Bus Emissions Data**

Disruptive traffic flow around key areas of heavy vehicle use correlate closely to locations of poor air quality, research carried out by environmental consultancy Ricardo AEA in Brighton has shown. The research, which was carried out on behalf of Brighton & Hove city council and The Brighton & Hove Bus and Coach Company will be used by the authority to inform proposals for improving traffic flow within the city.

Among the main contributors to the output of emissions was the 'erratic', stop-start operation of buses operating on along an uphill stretch of a bus route monitored as part of the study.

Ricardo claimed that the demanding cycles of acceleration and braking would be expected to challenge the performance of vehicles and strongly correlated with real time vehicle emissions data which demonstrated higher levels of pollutants at these locations.

The tests were carried out on buses fitted with exhaust gas recirculation (EGR) technology, selective catalytic reduction (SCR) aftertreatment, and a further SCR-equipped diesel-electric hybrid vehicle. Each bus was instrumented with HORIBA's advanced Portable Emissions Monitoring System (PEMS) equipment and artificially loaded with ballast representing a 70% passenger load (for reasons of health and safety, passengers were not carried and the test runs were not part of the regular timetable).

The vehicles were tested on multiple trips and in normal traffic during business hours, stopping at regular bus stops in a similar manner to the normal passenger service. A number of different drivers and driving styles were used in testing one of the three vehicles so that the effects of these variables could also be assessed.

The results of the research were presented to Brighton & Hove City Council in early July.

### **3. Warning as Scottish Cities Breach EU Safety Levels of Deadly Air Pollution**

Plans to cut dangerous levels of air pollution from traffic in Scotland have been delayed by five years, putting the UK and Scottish governments at risk of multi-million-pound fines for breaching environmental law. Glasgow is not expected to comply with air pollution safety limits until 2025, while Edinburgh, Aberdeen, Dundee and other conurbations won't meet the limits until 2020. The delays mean Scotland is deeply embroiled in a legal case that has already found the UK Government guilty of breaking air pollution law.

The delays have appalled environmentalists, who warn that thousands more people will suffer and die as a result. For the Scottish Government, they were "disappointing", while local authorities stressed the work they were doing to cut pollution.

Toxic particles from vehicle exhausts are blamed for killing at least 1600 people a year in Scotland, and 166,000 a year across Western Europe. They can trigger heart attacks, aggravate lung diseases and cause infections.

The UK agreed to an air pollution law that required levels of nitrogen dioxide gas in cities to be brought below safety limits by 2010. But as it had difficulties meeting this target, it applied for extensions until 2015.

In 2011 the Department for Environment, Food & Rural Affairs (Defra) accepted that Glasgow, along with other polluted urban areas in England, would not meet the target until 2020. This prompted the European Commission to launch a legal action against the UK in February.

But now, Defra has revealed that the situation has become far worse. Earlier this month it released a new set of "more pessimistic" official projections showing the Glasgow urban area is not expected to comply with pollution standards until 2025. Another three large areas - Edinburgh, central Scotland and northeast Scotland - had been expected to comply with the extended deadline of 2015. But now, according to the new Defra projections, the air will not meet safety limits until 2020.

This means that the areas, which include Aberdeen, Dundee, Falkirk, Perth and other towns, become implicated in a second legal action being brought against the UK government by the environmental lawyers, ClientEarth. Last year, this led to the UK Supreme Court declaring the UK Government in breach of its legal duty to meet nitrogen dioxide safety limits.

The UK court has now asked the European Court of Justice to rule on what remedial action it can compel the government to take.

Experts say the UK Government could end up being fined hundreds of thousands of pounds a day for the breaches. "Our case now has even wider significance for air quality throughout the UK," said ClientEarth's lawyer, Alan Andrews. "Unless the Government comes up with a plan to tackle pollution from road traffic, people will suffer from illegal levels of pollution for decades to come."

The Scottish Government defended its role in trying to cut air pollution. "These revised projections from Defra are very disappointing as previous projections suggested that all parts of Scotland would comply with legal limits for nitrogen dioxide pollution from traffic within the next couple of years," said a spokeswoman. She argued that Scotland had been working hard with local authorities and others to make "significant improvements" in air quality in recent years. "Our action plans set out the work being done to meet European Union standards in the shortest possible time."

Glasgow City Council said it has two pilot projects to fit sensors to street lights to monitor air pollution levels. "The real-time information will help identify the reason for spikes such as taxis failing to turn their engines off at ranks, or buses sitting with their engines running at bus stops."

Aberdeen City Council said it was reducing pollution by managing traffic in the city center, starting a car club and launching a fleet of hydrogen buses. A spokeswoman said: "The Aberdeen western peripheral route is also expected to improve air quality by diverting traffic from the city center."

#### **4. Boris Johnson Defends London's Record on Air Pollution**



Researchers from King's College London found that concentrations of nitrogen dioxide in Oxford Street are the worst on earth. Photograph: Peter Macdiarmid/Getty Images

The Mayor of London's office has strenuously defended the city's record on air pollution, insisting that it is far from the worst polluted city, despite data showing that nitrogen dioxide (NO<sub>2</sub>) levels have been higher than anywhere else yet recorded. Boris Johnson's top air quality officials told

the Guardian that it was “ludicrous” to put London in the same category as capitals such as Mexico City, Delhi and Beijing, and other cities.

“It’s not even comparing apples with pears, it is comparing apples with cucumbers,” said Matthew Pencharz, the mayor’s adviser on environment and energy. Pencharz claimed other cities frequently site their air quality monitoring stations far from the sources of the worst pollution, for instance in parks, quiet roads or suburbs, but that London’s monitoring stations are “more reliable” because they are sited near busy roads.

Levels of NO<sub>2</sub> on Oxford Street in 2013 were at an annual mean of 135 µg m<sup>-3</sup>, according to samples taken by the London Air Quality Network.

Other data analyzed by the European Environment Agency also showed London topping Europe’s cities for air pollution, though at lower levels than the Oxford Street samples, which were not submitted for the agency’s consideration.

Under the EEA’s analysis, Marylebone Road, a busy London road where pollution levels frequently exceed the EU’s legal maximum, was found to be the worst in Europe in 2012, with 94 µg m<sup>-3</sup>, compared to a maximum of 40 µg m<sup>-3</sup> which is considered by the EU to be the upper safe limit for human health. The next worst European cities were Stuttgart, with 91 µg m<sup>-3</sup> at one site and 90 µg m<sup>-3</sup> at another, and Paris with 90 µg m<sup>-3</sup> at one site.

But Pencharz said that the data cited was not representative, because other cities have fewer monitoring stations and submit less data. London had more monitoring stations than Paris or Rome, for instance, with 157 sites compared to 32 in Paris, 13 in Rome, 17 in Berlin and 19 in Amsterdam, in 2011. He also said other cities frequently sited their monitoring stations away from some of their main polluting sites, and therefore were not as reliable as the UK.

The mayor’s office said: “More monitoring stations means we can do the responsible thing and place our monitoring stations directly in the most polluted roads. Some cities place their monitoring stations in vast green parks or traffic-free courtyards, hence the lower figures they report. That’s why Oxford Street records comparatively high levels of pollution than for many other cities – but to say it is the worst of any place on Earth is misleading.”

Martin Adams of the European Environment Agency confirmed that member states could pick the data they wanted to submit on air quality, provided that it met certain criteria and a minimum number of sampling stations were included. “That is the flexibility that member states have,” he told the Guardian. “That is the responsibility of member states – to choose the monitoring stations [from which they submit data].”

Pencharz also said London was leading the world’s cities in improving air quality. He has said that emissions of NO<sub>x</sub> have fallen on average by a fifth since Johnson was elected, and the number of Londoners living in areas that break EU limits for the gas had been halved.

NO<sub>2</sub> can contribute to breathing difficulties, and is a particular problem for young children, older people and susceptible adults, such as those with existing respiratory conditions. Diesel-fuelled vehicles are a major source of the pollutant, and London is facing hefty fines from the European Union for flouting NO<sub>2</sub> limits.

Johnson recently unveiled plans to double the current congestion charge for drivers of diesel-powered vehicles. He said that diesel was worse for air pollution than alternatives including petrol,



electric vehicles and other transport. The new plans – which must be put out to consultation before they can be adopted – would not come into force until 2020.

The dispute follows a presentation last month by Dr David Carslow at Kings College London, where Carslow suggested that the annual hourly and annual levels of NO<sub>2</sub> pollution on the street were beyond anywhere else in the world. For the study, scientists installed a monitoring station on the street and recorded an NO<sub>2</sub> concentration of 135 micrograms (mcg) per cubic meter of air. These levels are more than four times higher than the EU's safe limit of 40mcg – and beat the levels of NO<sub>2</sub> found in Asian cities.

Boris has also said that the city is intending to tackle pollution levels in the capital with ultra-low emission zones and emission regulated buses and taxis – adding “we are determined to beat this.”

Environmental campaigners including Clean Air in London, Friends of the Earth, Greenpeace, Client Earth, as well as the Green Party, Labour and the think-tank IPPR have all called for a reconsideration of fuel taxes given the health problems associated with the lower-taxed fuel.

Simon Birkett, founder and director of Clean Air in London, told the Guardian the problem was now acute and must be dealt with: “Successive governments have incentivized the use of diesel vehicles, especially through company car taxation, even though they have known for over ten years that doing so was killing people. We need action now to ban carcinogenic diesel exhaust from the most polluted places by 2020 with an intermediate step by 2018 and an inquiry to discover how this public health catastrophe happened in the first place.”

Client Earth, another environmental pressure group, said that higher taxes on diesel relative to petrol should be considered urgently, together with reform of vehicle excise duty and company car tax. “It needs to happen as part of a comprehensive plan to tackle diesel pollution in the shortest time possible,” a spokesman said.

The IPPR think-tank said: “[Current] taxes do not reflect where a car is driven, or at what time of day. There are undoubtedly significant problems. Diesel vehicles are the most polluting.”

Frank Kelly, a professor at King's College London, told the Guardian: “Diesel cars have to date been regarded as the ‘green’ option because they appear to offer better fuel consumption and hence CO<sub>2</sub> emissions than petrol cars. This image of diesel cars however is wrong as they emit more harmful air pollutants, such as nitrogen dioxide and particulate matter. Given the shortcoming of diesel vehicles a sensible option would be discourage their use through a higher fuel taxation.”

Under Johnson's plans, from 2020, all drivers of diesel vehicles, and petrol cars registered before 2006, will have to pay an extra £10 to drive into central London on top of the existing congestion charge, as part of his ‘air quality manifesto’. Only those diesel vehicles that meet the EURO6 emissions standard will be exempt from the charge.

Caroline Russell, spokeswoman on local transport for the Green Party, said: “Policy has... failed to keep up with a growing body of evidence that shows that the reality of diesel performance in the stop-start city-driving situation is nothing like that achieved on a test track and increasing awareness of the damaging impact of diesel particulates on air quality and human health.

“Government and local authorities must act fast to protect our health from the effects of diesel pollution and use all measures at their disposal - this should include working towards a diesel ban and removing fuel duty incentives.”

RAC Foundation director Professor Stephen Glaister said: “This isn’t quite a miss-selling scandal, but for years ministers took their eye off the ball and encouraged drivers to buy diesels to help fight climate change. That has come at a cost: local air pollution. Today 10 million cars in Britain are powered by diesel engines - a third of the total.

“Part of the problem is regulation. In laboratory conditions diesel cars have met strict test criteria. Unfortunately that performance hasn’t been matched on the road and now we have a significant health issue because of the dash for diesel.”

A spokeswoman for the Department for Food, Rural Affairs and the Environment did not comment on whether diesel taxation should be reviewed but said: “Local authorities also have powers to introduce low emission zones and other access control schemes to reduce emissions on the most polluted roads. This could include an age restriction on certain diesel vehicles - the government is not considering a blanket ban on the production and sale of diesel vehicles.”

A spokesman for the Society of Motor Manufacturers and Traders said: “Any changes [to fuel tax] should reflect national UK-wide issues rather than address localized environmental concerns, however valid those may be. Vehicle Excise Duty continues to be an effective incentive for consumers to consider the environmental benefits of lower emission vehicles.”

## **5. Toyota Hybrids: A Cleaner Choice for Urban Streets?**

Diesel-powered vehicles are a significant contributor to NOx pollution in cities and also produce particulates. Toyota’s Hybrid Synergy Drive system, available in Prius, Prius+, Auris, Auris Touring Sports and Yaris models in the UK, creates only minimal amounts of NOx and no particulates, and already conforms with the more stringent, up-coming Euro 6 vehicle emissions standards. What’s more, these vehicles can all be driven short distances at city traffic speeds on electric power alone, with zero tailpipe emissions, thus creating no air pollution in the most sensitive urban areas.

Where Prius Plug-in is concerned, the electric range is even greater, and achievable at higher speeds, making an emissions-free daily urban commute a real possibility.

## **6. Every Car on Roads to Be Low Carbon by 2050, Says Transport Minister**

By 2050, every car on UK roads will be low carbon. That’s the conclusion of Baroness Kramer at the recent Low Carbon Vehicle Partnership (LowCVP) Annual Conference. Held on 15th July in Westminster, the event saw the gathering of businesses, manufacturers, charities and Governmental officials to discuss the progress of carbon emissions reduction in the automotive sector.

Speaking on behalf of OLEV, Baroness Kramer, Transport Minister, gave the conference’s keynote address. She explained how ‘low carbon partnerships had shaped the transport agenda’ of the last ten years, and professed the Government’s commitment to low carbon policy: ‘We are determined that Britain will be the world’s largest hub for alternatively fuelled and low carbon vehicles.’

Baroness Kramer gave a breakdown of how the Government's £1bn investment to 2020 to develop Ultra Low Emissions Vehicle would go towards achieving this aim, including £21m to grow the UK's fast charging network, £37m to support the installation of charging points and offices and homes and £30m to support the development of low-carbon buses.

'By 2050, we expect every car on UK roads to be low carbon,' she concluded.

A study into the link between policies that favor low carbon vehicles and the rising levels of UK automotive investment was also launched at the conference. Peter Wells, Professor at the Centre for Auto Industry Research at Cardiff Business School and a co-author of the report, give an overview of the ups and downs that the UK car industry had experienced over the last 10 years, including its globalization, the impact of recession and the industry's progress towards reducing the UK's greenhouse gas emissions by at least 80% (from the 1990 baseline) by 2050. He praised the automotive industry's commitment to making vehicles more efficient, citing the average fuel efficiency improvement of 33% for cars in 2013 over 2003 models as an example of its progress.

Adam Chase, director of E4Tech and another co-author of the report, outlined the low CO2 policy advancements that have been achieved in the first ten years of low carbon legislation, including the Climate Change act of 2008, the establishment of the Automotive Council in 2009 (created to facilitate dialogue between the automotive industry and Government) and the establishment of the Office for Low Emission Vehicles (OLEV).

OLEV is a team working across Government to support the early market for ultra-low emission vehicles (ULEV).

## **7. Foreign Drivers on Germany's Autobahn May Soon Pay Toll Based on CO2 Emissions**

Germany's transportation ministry wants to require drivers of foreign-registered passenger cars using the country's famed autobahn to pay a toll based in part on their emissions of greenhouse gases. The ministry is in talks with the finance ministry and chancellery on the matter, according to the press spokesman for the transportation ministry. Transportation Minister Alexander Dobrindt is expected to present a bill related to the toll before the parliamentary summer break begins.

If enacted, the measure could require drivers of foreign registered cars to pay a new annual toll by the start of 2016.

The transportation ministry told reporters that the bill would take the car's environmental standards into account in a similar manner to the German motor vehicle tax, the Kraftfahrzeugsteuer. Introduced in July 2009, that tax is calculated according to engine volume and CO2 emissions.

Money generated from the toll will be reinvested in German roads and the toll would "not burden" German-registered vehicles, as outlined in the Christian Democrat-Social Democrat coalition agreement published in November 2013, said the transportation ministry. "We will charge an appropriate contribution to the owners of cars not registered in Germany with the stipulation that no car owners in Germany will be more heavily burdened than today," said the coalition agreement.

While the transportation ministry said the toll would conform to the European Union's nondiscrimination rules, transport analysts have raised doubts that solely burdening foreign-registered vehicles are in line with bloc rules.

According to the transport ministry, there are also plans to expand Germany's truck toll in stages, although a bill has not yet been presented. If the changes are approved the truck toll would be expanded beyond the autobahn to 1,000 kilometers of multi-lane "autobahnähnliche Bundesstrassen" (federal highways similar to the autobahn) from July 1, 2015, while trucks of more than 7.5 tons would be subject to the toll starting Oct. 1, 2015. The truck toll would then apply to all Bundesstrassen (federal highways) starting July 1, 2018.

## **8. Russian Funding Could Jump Start Arctic Council Environment Projects**

The first environmental projects supported by the Arctic Council, aimed at reducing persistent organic pollutants, mercury and black carbon in the Russian Arctic, are set to move forward after the Russian government transferred funds necessary to launch the group's financing mechanism. The projects on mercury and black carbon have long been co-led by the U.S. and Russia and would represent ongoing cooperation in the field of the environment despite the tensions over Ukraine, during which the U.S. has cut off cooperation with Russia in a number of spheres, such as trade and nuclear energy development.

Russia sent 5 million euros (\$6.8 million) to the Arctic Council's Project Support Instrument (PSI) on July 16, the Russian Ministry of Natural Resources and Environment said. Russia is the largest single contributor, with a total financing commitment of 10 million euros (\$13.5 million).

The U.S. has so far contributed 383,000 euros (\$518,000) and pledged 3.8 million euros (\$5.1 million), according to a March presentation from PSI administrators. All the other Arctic Council countries—Canada, Denmark, Finland, Iceland, Norway and Sweden—and other participating organizations have also pledged and contributed financing.

The PSI, established in 2005, has an overall funding commitment of 15.9 million euros (\$21.5 million). The receipt of the Russian funds will allow the PSI to become operational, according to Husamuddin Ahmadzai, special adviser on environment and technology at the Nordic Environment Finance Corporation (NEFCO), which administers the PSI.

The three projects awaiting implementation through PSI financing received initial approval from the Arctic Council, but the PSI committee still needs to provide final approval for funding of the projects, according to Ahmadzai.

The U.S. EPA is heavily involved in the project to reduce black carbon from diesel generators in a small Arctic municipality, by providing alternative off-grid energy solutions. It will provide its expertise and other support, including U.S. funding designated for black carbon reduction projects, according to a March 18 project proposal.

The Russian Ministry of Natural Resources and Environment focused on the importance of international cooperation in the Arctic to help ensure environmental safety amid increasing resource extraction and shipping activity. "Cooperation with the international community in protecting the Arctic is an important part of the environmental protection activities in the Russian Federation," said Rinat Gizatulin, deputy minister of natural resources and environment and chairman of the Russian intergovernmental commission on the Arctic Council PSI.

Ahmadzai called the projects “instruments to help the policies of the Arctic Council to go from the talk to the walk.”

The projects are also aimed at helping shape legislative changes needed to ensure implementation of further work going ahead, Ahmadzai said, calling them “one part of the jigsaw puzzle” to realizing broader environmental improvements.

### **9. NOx from New Euro VI Vehicles Varies - Study**

New lorries and buses certified against Euro VI emission standards emit far less NOx in real-world tests than their predecessors, Dutch tests suggest. However, the difference was more marked for lorries used for long-distance journeys than buses and vehicles used for distributing goods in urban areas.

Research institute TNO, which conducted the tests, suggests further improvements might be needed to the Euro VI test standards to ensure better urban performance.

The Euro VI rules, which have applied to all new vehicles since the start of the year, already have tighter emission limits and test rules than their predecessors.

The TNO study concentrated on NOx as the Netherlands has problems meeting EU standards for NO2 in some urban areas.

It found that six Euro VI long-distance diesel-fuelled lorries emitted on average less than 0.5 kilograms of NOx per kilogram of CO2 at 0-50 kilometers per hour, compared with about 6g/kg for equivalent Euro V vehicles.

Euro VI buses and distribution vehicles took longer to appear on the market so TNO was only able to test three. Only one had emissions below 1g/kg at 0-50kph when tested on an urban route. The difference between the groups is the result of pollutant control systems working better when vehicles' engines are warmer.

### **10. European Commission Calls for 30 Percent Energy Cut by 2030 to Help GHG Goals**

In order to help the European Union increase energy security and meet new, ambitious greenhouse gas reduction targets, the European Commission outlined a plan calling for a non-binding 30 percent reduction in energy use via energy efficiency by 2030.

Noting that the EU is likely to miss its current 2020 energy efficiency target of 20 percent by 1 or 2 percent, the commission insisted that the 30 percent goal was beyond what would be needed for the EU to meet its goal of reducing greenhouse gases by 40 percent in 2030 from 1990 levels. Earlier in 2014, the commission proposed a new renewable energy target for 2030 that would require the 27 percent of all EU energy consumption to come from wind, solar and biomass.

However, because the EC new energy efficiency plan, like the renewable proposal, doesn't include a legal binding commitment, it has triggered a wave of criticism from some EU member states, European Parliament political groups and environmental organizations. The commission plan has also been criticized by the leading EU business lobby group for being too ambitious and a threat to economic growth and jobs.

According to European Energy Commissioner Guenther Oettinger, the new 30 percent target for 2030 strikes a compromise that would get the unanimous support it will need among EU member states in order to be approved later in 2014. "This plan is ambitious and at the same time realistic," Oettinger said at July 23 press conference after the 28-member commission approved the plan. "Our aim is to give the right signal to the market and encourage further investments in energy saving technologies to the benefit of businesses, consumers and the environment."

Oettinger also said the EC would be proposing new legislation in the coming year, including new energy building standards and other product and energy consumption and labeling requirements that would complement the proposed new energy efficiency target.

The urgency of the energy efficiency proposal has heightened in recent months as the EU searches for ways to reduce its energy dependency on Russia, which provides the bloc with 30 percent of its natural gas consumption. For that reason and also because analysis indicates a more ambitious energy efficiency plan would stimulate job growth, both the second and third leading political groups in the European Parliament insisted the target should be higher and should be mandatory.

Based on data published on July 23<sup>rd</sup>, the commission will miss its 2020 energy efficiency target of 20 percent reduction by 1 or 2 percent mainly because only a small number of EU member states have fully implemented and applied the 2012 legislation that mandated the non-binding goal. Overall, the commission has initiated legal action against 23 EU member states over the failure to either transpose or implement the EU 2012 energy efficiency legislation.

In January, the commission proposed its new target of reducing greenhouse gas emissions by 40 percent from 1990 levels by 2030 and the 27 percent renewable energy target. EU leaders were due to vote on the legislation in March but the crisis in Ukraine pushed back the vote. A similar delay was agreed to on June 27 and EU leaders are due to take it up again October.

## **11. EU Regulators Seek To Close Car Emissions Testing Loopholes**

EU regulators are preparing draft legislation that will require vehicle fuel use to be tested on roads rather than in laboratories, looking to close loopholes that allow car makers to exaggerate fuel-saving and emissions credentials. European Commission research published last year showed that lab techniques, such as taping up car doors and windows and driving on an unrealistically smooth surface, explained around a third of a recorded drop in average EU emissions of carbon dioxide (CO<sub>2</sub>), linked to reduced fuel consumption.

An EU official, talking to journalists on condition of anonymity, said a proposal on "a new real-world testing method" was expected by the year-end. This would need to be endorsed by EU member states. Other officials also told the press that a proposal was expected over the coming months.

The Commission, the EU executive, says nitrogen oxide (NOX) emissions, linked to lung disease and hundreds of thousands of early deaths, have been miscalculated to a still-greater extent than CO<sub>2</sub> levels. "In the real world we have seen that NOX emissions are higher than indicated by the test, up to a factor 4 or 5 and exceptionally more," one EU official said.

A policy document published last year said "real-world" NOX emissions were roughly five times the EU limit, adding that had a major impact on pollution and generated "negative publicity and reputational damage for vehicle manufacturers".

Under the testing regime from September 1<sup>st</sup>, diesel models, which have been particularly blamed for NOX emissions, should emit no more than 0.08 gram (80 milligrams) of NOX per kilometer. Environmental groups, independent researchers and the Commission say even in the new regime, loopholes mean real world emissions will be higher.

The car industry has acknowledged the tests are flawed, but argues the Commission needs to be realistic. VDA, the lobby for the German car industry, said it was working on its own real-world testing proposal, which it would put before the Commission.

Already, the industry says, it has a major challenge to adapt to law that the European Union agreed earlier this year, which enforces the world's toughest limits on carbon dioxide. And it says it is too soon to set a 2025 standard on car CO2 emissions, which the Commission has also said it is working on, with a view to a policy announcement this year. "Further targets should not be set prematurely for the period after 2021," VDA said in a statement. It said it was vital "industrial policy and climate protection targets have equal priority".

## **12. Russia Delays Enforcement of Auto Emissions Rules Due to Lack of Cleaner Fuel**

Russia has delayed the implementation of stricter Euro-5 vehicle emissions rules until 2016, citing a lack of cleaner-burning fuel in rural areas. Euro-5 standards for motor vehicles produced or sold in Russia were supposed to go into effect Jan. 1, 2015. But on July 30<sup>th</sup>, Prime Minister Dmitry Medvedev approved amendments to the federal technical regulations for motor vehicle emissions, which include the delay until Dec. 31, 2015.

The amendments were officially published on August 5<sup>th</sup>.

Since 2012, the government has repeatedly delayed implementation of tougher automobile and fuel standards. The Ministry of Industry and Trade advocated for the latest delay, saying the regions lack an adequate supply of the higher grade fuels needed for cleaner burning engines to operate.

The move comes despite a recent agreement between a government agency and domestic oil refiners to produce higher grade fuels, which officials said at the time would allow the stricter automobile standards to go into force at the start of next year.

## **13. GM Cuts Production in Russia As Market Slump Continues**

General Motors Co. said it will reduce production at its plant near St. Petersburg, Russia, citing a continued slowdown of the country's auto market. The plant, which makes Chevrolet Cruze, Opel Astra, and Chevrolet Trailblazer models, will only work four days in August and four in September, extending to eight in October, a company spokesman said.

Car sales have faltered in Russia this year as economic growth has slowed, causing people to put off large purchases. Consumer sentiment has come under further pressure because of Western sanctions over the crisis in Ukraine.

The downturn in Russia's car market gathered pace in July, with sales sliding 23 percent year-on-year after a 17 percent fall in the previous month, according to the Association of European Businesses (AEB) lobby group. AEB data showed that sales of Chevrolet cars fell 45 percent to

8,457 units in July, year-on-year, while Opel sales tumbled 25 percent to 4,927 vehicles, according to AEB data.

#### **14. Russia's Avtovaz to Cut Lada Production**

Russia's AvtoVAZ said it plans to cut production of its Lada cars in the next three months by 25,000 because of rapidly declining demand for new vehicles in the country.

The company, controlled by the Renault-Nissan alliance, said it produced 47,100 Ladas as well as 12,100 Renault and Nissan vehicles last month. "Because of the decrease in sales of all cars in the Russian market, and in order to better manage inventory levels, AvtoVAZ made a decision to reduce production of Lada cars in September, October and November for a total amount of 25,000," the company said in a statement.

Sales of the country's best-selling brand fell 16 percent to 220,822 vehicles during the first seven months of the year, according to data from the Moscow-based Association of European Businesses (AEB).

AvtoVAZ said its workers would continue to receive their full salaries in the next three months.

#### **15. Russia to Introduce New Car Scrappage Scheme**

Russia has said it will introduce a new scrappage scheme to try to boost flagging car sales.

The government has put aside 10bn rubles (\$272m; £164m) to pay owners of cars that are at least six-years old an incentive to buy a new vehicle. Car owners will be eligible for a discount of at least 40,000 rubles.

The government expects the scheme, which will run to the end of the year, to subsidize the sale of more than 170,000 vehicles. The scheme could "seriously stimulate sales," said Prime Minister Dmitry Medvedev, according to local news agencies.

Car sales fell by almost a quarter in July compared with a year earlier, following a sharp fall in the previous month.

Russia, along with many other countries including the US, the UK, Germany and France, first introduced a car scrappage scheme during the global economic downturn.

Car sales have faltered in Russia this year as economic growth has slowed, causing people to put off large purchases. Consumer sentiment has come under further pressure because of Western sanctions over the crisis in Ukraine.

The downturn in Russia's car market gathered pace in July, with overall sales sliding 23 percent year-on-year after a 17 percent decline in June, according to AEB data. Lada sales tumbled 25 percent to 28,014 in July, AEB figures show.

In 2013, AvtoVAZ produced 438,400 Ladas and 20,800 Renault and Nissan cars, while in the first seven months of 2014 production stood at 213,700 and 51,800 respectively, according to ASM-

#### **16. Four Octel (Innospec) Employees Sentenced on Leaded Gasoline Bribery**



Four men were recently sentenced for their roles in bribing state officials in Indonesia and Iraq, following a Serious Fraud Office investigation into Associated Octel Corporation (subsequently renamed Innospec).

- Dennis Kerrison, 69, of Chertsey, Surrey, was sentenced to 4 years in prison.
- Paul Jennings, 57, of Neston, Cheshire, was sentenced to 2 years in prison.
- Miltiades Papachristos, 51 of Thessaloniki, Greece, was sentenced to 18 months in prison.
- David Turner, 59, of Newmarket, Suffolk, was sentenced to a 16 month suspended sentence with 300 hours unpaid work

Mr. Kerrison and Dr Papachristos were convicted of conspiracy to commit corruption in June 2014 in relation to Indonesia only. Mr. Jennings pleaded guilty in June 2012 to two charges of conspiracy to commit corruption and in July 2012 to a further charge of conspiracy to commit corruption in relation to Indonesia and Iraq. Dr Turner pleaded guilty to three charges of conspiracy to commit corruption in January 2012 in relation to Indonesia and Iraq.

Upon sentencing the defendants, HHJ Goymer said:

"Corruption in this company was endemic, institutionalized and ingrained... but despite being a separate legal entity it is not an automated machine; decisions are made by human minds.

"None of these defendants would consider themselves in the same category as common criminals who commit crimes of dishonesty or violence..... but the real harm lies in the effect on public life, the effect on community and in particular with this corruption, its effect on the environment. If a company registered or based in the UK engages in bribery of foreign officials it tarnishes the reputation of this country in the international arena."

Concerning the sentencing of Dr Turner, the Judge also said: "It is necessary to give encouragement to those involved in serious crime to cooperate with authorities. You [Dr Turner] very narrowly indeed escaped going to prison."

Innospec itself pleaded guilty in March 2010 to bribing state officials in Indonesia and was fined \$12.7 million in England with additional penalties being imposed in the USA.

Dr Turner was also ordered to pay £10,000 towards prosecution costs and Mr. Jennings was ordered to pay £5000 towards these costs. Dr Turner and Mr. Jennings have already been subject to disgorgement of benefit by the US Securities and Exchange Commission. The matter of costs for Mr. Kerrison and Dr Papachristos has been adjourned pending the hearing of confiscation proceedings against them.

## NORTH AMERICA

### **17. Rising Sea Level, Temperatures Pose Threats to Security DOD Official Says**

A top Defense Department official told a Senate Foreign Relations panel on July 22<sup>nd</sup> that rising global temperatures will likely pose an increasing threat to U.S. security in the decades ahead, with rising sea level affecting military bases and training areas that help ensure continued U.S. military readiness.

Daniel Chiu, deputy assistant secretary of defense for strategy and force development, told the subcommittee that sea-level rise and more severe weather events “will have an impact on our bases and installations at home and overseas; on the operating environment for our troops, ships, and aircraft; and on the global security environment itself” in the decades ahead.

Sea rise and storm surges already are affecting U.S. military bases and changing “our assumptions on when and where certain types of military operations can take place,” Chiu said at the hearing before the Subcommittee on International Development and Foreign Assistance, Economic Affairs, International Environmental Protection and Peace Corps.

Chiu noted that the Defense Department has repeatedly addressed climate-related national security concerns in detailed analyses such as the 2014 Quadrennial Defense Review and the department's 2013 Arctic Strategy, which focuses on U.S. security challenges raised by thawing sea ice.

President Obama also launched a Quadrennial Energy Review in January, with the initial report due to focus on climate-related impacts on U.S. energy availability and infrastructure and the adequacy of current executive and legislative actions. The report is to be completed in January 2015.

The July 22<sup>nd</sup> hearing focused on security implications of international energy and climate policies. Subcommittee Chairman Edward Markey (D-Mass.) said climate-related national and energy security concerns are being addressed at the highest level by multiple U.S. agencies and departments, in contrast to just a few years ago.

In addition to Chiu, others testifying before the panel were Eric Postel, the U.S. Agency for International Development's assistant administrator for the bureau of economic growth, education and environment; and Amos Hochstein, the State Department's deputy assistant secretary for energy diplomacy.

Chiu said climate effects are “particularly acute” in the Arctic region, which today is a “remote, isolated” environment. But in decades ahead, he said, “diminishing sea ice will make the Arctic Ocean increasingly accessible and used by Arctic as well as non-Arctic nations.” The Defense Department official said, however, that the prospect of near-term military conflict in the region has likely been overstated in some media reports and that the department has ranked the region as a “relatively low-threat environment.”

A military buildup there “beyond what is required for existing [Defense Department] missions could send the wrong signal about our intentions for the region,” Chiu said.

But the top Republican on the subcommittee, Sen. John Barrasso (R-Wyo.), said the Obama administration has repeatedly overstated the impact of rising global temperatures on national security at a time when the U.S. is “facing serious security threats” such as terrorism. Barrasso took issue with Secretary of State John F. Kerry's comments in February that ranked climate change as a top global threat, alongside top-tier concerns such as weapons of mass destruction and poverty.

The Wyoming Republican said the \$7.5 billion total the U.S. spent for international climate assistance to developing nations in fiscal years 2010, 2011 and 2012 should have been put to better use in boosting security at U.S. embassies and other more traditional security needs.

## **18. Diesel Car Sales Rise 25 Percent in 2014**

Sales of diesel cars in the United States have increased by 25 percent in the first six months of the year, according to a new report. Clean diesel technology, a relatively new addition to the American market, has shown considerable advancement in the past few years.

Up until a few years ago, most Americans would probably have associated the word diesel with big pickup trucks and 18-wheelers, spewing black smoke as they churned along the highway. In reality, the stereotype diminished years ago, and the negative stigma has only recently started to disappear. Compared to Europe, where almost half of all cars sold are diesel, the U.S. has never quite caught on to the diesel trend, until now.

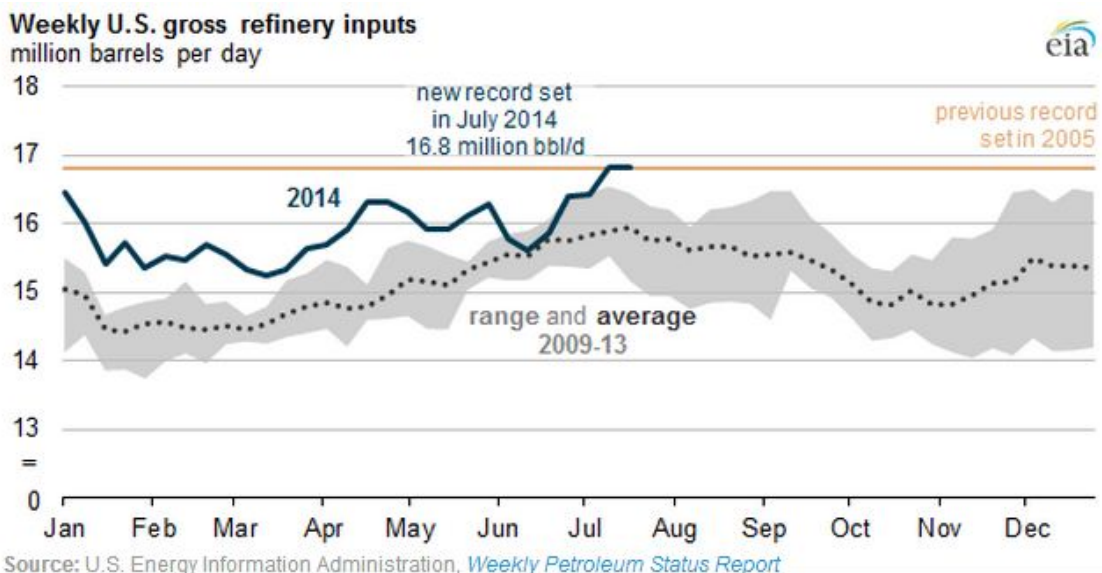
Month by month, diesel sales have continued to grow, with 43 of the last 47 months reporting an increase in diesel car sales. Clean diesels, which includes passenger cars and SUVs, have leaped forward in popularity, recording sales increases up to 60.4 percent in April 2014. Meanwhile, the hybrid market has started to show a decline.

The numbers show that between 2010 and 2013, diesel car registration increased by 30 percent, meaning the diesel trend is no fluke. Though diesel cars make up just three percent of the market, experts predict that the popularity of diesels will double by 2018.

More and more manufacturers are jumping on the diesel bandwagon, with the main charge being led by the Germans. Volkswagen, Audi, and Mercedes-Benz all build a variety of diesel vehicles, with more planned for the future. Other companies are choosing to put diesel engines into smaller pickup trucks, like the upcoming Nissan Titan and Chevrolet Colorado diesel.

## **19. EIA: U.S. Petroleum Refineries Running At Record Levels**

U.S. refineries have been processing record volumes of oil recently. Refinery inputs hit a record-high 16.8 million barrels per day (bbl/d) in each of the past two weeks, exceeding the previous record from summer 2005. Refineries in the Midwest and Gulf Coast in particular pushed the total U.S. input volume upward, as these refiners' access to lower-cost crude oil, expansions of refining capacity, and increases in both domestic demand and exports contributed to higher refinery runs.



Refinery gross inputs in the Midwest have been higher than the five-year range since late April. Typically, Midwest drivers use more motor gasoline in the summer, and some of that has come from the Gulf Coast. However, recent and planned changes to pipeline infrastructure have altered both the type of products in the pipelines and direction of flow. These changes increase the incentive for Midwest refiners to boost their own gasoline production.

The Midwest's record-high runs of 3.8 million bbl/d for the week ending July 11 pushed the region's refinery utilization to 100.3%, the first time any of the Petroleum Administration for Defense Districts (PADDs) has exceeded 100% since EIA began publishing weekly PADD-level utilization in June 2010. But this number says as much about the metric used as the feat itself. Refinery utilization is calculated based on calendar-day atmospheric crude distillation unit (ACDU) capacity, which takes into account usual operating conditions, including both planned and unplanned outages. Under ideal conditions, when outages are low, refiners can produce at levels above their calendar-day ACDU capacity.

Realization of long-anticipated capacity expansions in the Gulf Coast region has also pushed their regional refinery runs to record levels. Gulf Coast gross inputs rose to 8.5 million bbl/d for the week ending June 27 and reached 8.7 million bbl/d for each of the following two weeks. The United States remains an increasingly active participant in the global petroleum products trade. The Gulf Coast region's competitive advantage, which is based on upgrading capacity of refineries, relatively lower costs of inputs and fuel, and access to growing markets, keeps utilization rates high.

## 20. Mexico Plans to Tighten Heavy-Truck Emissions Standards by End of 2014

Seeking to eradicate its reputation for some of the world's worst air quality, Mexico will issue much more stringent heavy-truck emissions standards by the end of the year, a senior Mexican transportation official said. Mexican regulators are preparing new heavy truck emission standards that will match those now required in the European Union, Sylvia Trevino Medina, the director general of industry for the Ministry of Environment and Natural Resources, told reporters recently. Mexico raised emissions standards for new cars, pickup trucks and SUVs in 2012. The regulations

also introduced average fuel economy standards of 14.9 kilometers per liter (35 miles per gallon) starting in 2016.

Mexico has about 25 million vehicles on its roads, and adds about 1 million new automobiles each year. Its current requirements for heavy-duty vehicles match the Euro IV level of emissions control, which specifies limits for emitted carbon monoxide, nitrogen oxide and other particulate matter.

The Euro IV standard was adopted in the European Union in 2005, but was replaced there last year with the much more stringent Euro VI standard.

Mexico City has among the world's worst air quality, a designation that lawmakers are trying to change, with ambitious climate change goals that target a 30 percent reduction in emissions by 2020 and 50 percent by 2050. Lawmakers have eyed the transportation sector, which contributes about 20 percent of emissions pollution, to help achieve these goals.

The country has the needed emissions control technology, producing more than 10 percent of cars exported to the U.S. market, including California, which has the world's strictest emissions laws. These cars, however, use more efficient catalyzers than the ones sold in Mexico's domestic market, according to Stephen Perkins, the director of investigation for the International Transportation Forum.

Government officials say that higher international standards, and Mexico's interest in growing its share of auto manufacturing market, has helped motivate Mexico's own regulatory push.

"We are trying to harmonize our standards with those in the rest of the world," said Odon de Buen Rodriguez, director general for the National Commission for Efficient Energy Use at the Department of Energy, speaking at a vehicle efficiency standards conference in Mexico City on July 9<sup>th</sup>. "As one of the world's leading vehicle producers, this is something we have to pay attention to."

## **21. Obama to Attend UN Climate Summit in September, White House Confirms**

President Barack Obama will attend a one-day United Nations global leader climate summit in New York designed to create momentum for a 2015 international agreement on how to address climate change, the White House has confirmed. UN Secretary-General Ban Ki-moon has said the September 23<sup>rd</sup> summit will be an opportunity for world leaders to showcase the efforts their countries have already made toward addressing climate change and will provide nations with an opportunity to make fresh pledges for the 2015 international climate negotiations in Paris.

Nations from around the world will meet in late 2015 in Paris for the 21st Conference of the Parties to the UNFCCC to potentially sign a global climate agreement that would go into effect in 2020. The conference aims to reduce greenhouse gas emissions in hopes of limiting global temperature increases to two degrees above current levels.

A spokesman for Ban would not immediately confirm the attendance of Obama and Chinese President Xi Jinping at the summit but said Ban expected "attendees from the highest level of government" including presidents and heads of state. Christiana Figueres, the U.N. climate chief, told the website Responding to Climate Change that both Obama and Xi were part of a "very long list of confirmations" to the conference.

Obama's attendance at the world leader summit was expected but not previously confirmed. Ban has invited finance, business, civil society and local leaders from public and private sectors in addition to government leaders to attend the summit.

The summit will be held in conjunction with the 69th Session of the U.N. General Assembly, which runs from September 16-29 in New York.

Top officials from the U.S. and China, the world's largest emitters of greenhouse gases, again pledged to work cooperatively toward an "ambitious" global climate change agreement in 2015 during a July 9-10 strategic and economic forum in Beijing (see story below).

Obama himself has called for an "ambitious" 2015 international climate agreement and his administration believes recently announced carbon pollution guidelines for new and existing power plants could help galvanize international nations to act on climate change.

## **22. U.S., China Ink Coal, Clean Energy Deals but Climate Differences Remain**

The United States and China signed eight partnership pacts to cut greenhouse gases that will bring the world's two biggest carbon emitters closer together on climate policy, but fundamental differences between the two sides remain. Consensus between the United States and China will be a crucial part of any new global climate pact to replace the 1997 Kyoto Protocol, but they have long struggled to come to an agreement on how the costs of cutting greenhouse gases should be distributed among rich and poor nations.

Speaking in Beijing during the latest round of the U.S.-China Strategic and Economic Dialogue, U.S. Secretary of State John Kerry said that the two sides remained committed to "close dialogue" on climate change negotiations. "The significance of these two nations coming together can't be understated. We are working hard to find a solution together that can have an impact on the rest of the world."

The deals, which involve companies and research bodies, were signed in Beijing ahead of a two-day visit to China by top Obama administration officials, including Kerry, Treasury Secretary Jack Lew and Energy Secretary Ernest Moniz.

The signing was attended by Xie Zhenhua, vice chairman of China's National Development and Reform Commission (NDRC), Todd Stern, the lead U.S. climate treaty negotiator at the U.S. State Department, Obama adviser John Podesta and Lee Zak, director of the U.S. Trade and Development Agency.

In one of the memoranda of understanding (MOUs), China's Huaneng Clean Energy Research Institute, a subsidiary of state-owned power company China Huaneng and Washington-based Summit Power Group agreed to share information on clean coal power generation technology. Huaneng is part of a Chinese consortium operating a 400-MW pilot integrated gasification combined cycle plant in Tianjin.

Under the pact, Huaneng will share information with Summit Power, which is expected to soon break ground on a similar project in Texas after it secures engineering and procurement support from PetroChina and Chinese engineering firm Huanqiu Contracting and Engineering.

Summit, in turn, will share information and technology for recovering oil from captured carbon.

Another project partners West Virginia University with Yanchang Petroleum on an industrialized demonstration of ultra-cleaning technology in northern Shaanxi province.

The University of Kentucky, another coal state university, will partner with Shanxi Coal International Energy Group and Air Products and Chemicals Inc on a project feasibility study for a 350MW supercritical coal-fired power plant that can capture 2 million tonnes of CO<sub>2</sub> a year.

At a news briefing in the Chinese capital, the NDRC's Xie welcomed the closer partnership of the world's top two CO<sub>2</sub> emitters, but said more was needed in areas such as technological cooperation. "Developing countries are most concerned that they get funds and technological support from developed countries," he said. "On this issue, we are still having great difficulties and we have to put forth more effort."

China has led the way in trying to persuade developed countries to set up financing mechanisms to help poorer nations cut emissions and adapt to climate change.

The issue remains a major stumbling-block in talks on a new global accord, with the United States and others reluctant to commit funds.

Stern, the U.S. climate negotiator, said the United States didn't disagree with China that there should be a differentiation in responsibilities between developing and developed countries, but that using old definitions for those labels established in 1992 was a sticking point.

Xie told Chinese media that wider two-way talks would include a special high-level meeting on climate change, focused on discussing domestic and international policies and possible cooperation.

The U.S. delegation was in China for the sixth round of the U.S.-China Strategic and Economic Dialogue, which are high-level meetings on cooperation in areas from security to agriculture.

The two countries also agreed to adopt stronger standards for heavy- and light-duty vehicle fuel efficiency and greenhouse gas emissions, conduct a study on the potential for industrial boilers in China to switch from coal to natural gas and work together on greenhouse gas emissions from the land sector, which account for one-quarter of global emissions.

### **23. U.S. Envoy to U.N. Aviation Body Hopeful on Airline Climate Plan**

The question of how to reduce emissions from planes brought the European Union, the United States, China and others to the brink of a trade war last year. All eventually agreed to let the United Nations' International Civil Aviation Organization craft a global "market-based measure" by 2016. "I am extremely hopeful that we will be able to come to an agreement. I don't think I would have taken this position if I wasn't hopeful of that," said Michael Lawson, the new U.S. ambassador to ICAO, in an interview.

Lawson was finally confirmed by the Senate recently and arrived in Montreal, where ICAO is based, shortly afterward. He has landed in the middle of several high-profile discussions at ICAO.

Along with environmental policy, the organization is looking at how best to track flights after the disappearance of a Malaysia Airlines plane in March, and how to protect passengers flying over conflict zones after the downing of a Malaysia Airlines plane in Ukraine last week.

Lawson said safety is one of the most important issues before ICAO, referring to the two Malaysia Airlines incidents. But he declined to discuss U.S. positions in detail, since he had not yet been fully briefed. A senior State Department official said the United States is not seeking changes to the ICAO guidelines on global aviation after the two incidents, but would participate in any ICAO-led reviews to determine whether changes are needed.

Asked whether the push to regulate aviation emissions is part of the Obama administration's "climate action plan," Lawson said it is. As part of the plan, announced last year, the administration has pledged to work to persuade other countries to fight climate change.

Lawson, a retired partner of law firm Skadden, Arps, Slate, Meagher & Flom, has served on the board of the organization that oversees Los Angeles International and several nearby airports.

#### **24. U.S. Scientists Urge 'National Vision' To Curb Coastal Risks in Report**

A group of top scientists has called for a fundamental change to how the United States deals with risks to its Atlantic and Gulf coasts from storms and climate change in a new National Research Council report. Urging a "national vision" toward addressing coastal risks, the report comes on the heels of a Reuters analysis published earlier in July showing that coastal flooding along the densely populated Eastern Seaboard of the United States has surged in recent years, with steep financial consequences.

The great majority of money - most of it federal dollars - spent on coastal risks goes toward recovery after a disaster rather than on planning for and mitigating against storms, climate change and sea-level rise, the report said. Instead, the federal government should push for a national coastal risk assessment to identify best practices and uniform measures of progress, and move away from the current decentralized approach to coastal management, the report said.

Such a shift would help the U.S. "move from a nation that is primarily reactive to coastal disasters to one that invests wisely in coastal risk reduction and builds resilience among coastal communities," a statement accompanying the report said.

Since 2001, water has reached flood levels an average of at least 20 days per year in six eastern U.S. cities, including Atlantic City, New Jersey and Charleston, South Carolina - which has more than \$200 million in flood-control projects underway, the Reuters analysis found.

The National Research Council study is part of a five-year effort to advise the U.S. Army Corps of Engineers on scientific, engineering and water resources planning issues.

#### **25. Cummins Says It's First to Meet CARB LEV III Standards in Medium-Duty Vehicle**

Cummins has announced that it has received certification for its 6.7L Turbo Diesel from the California Air Resources Board, meeting the Low-Emission Vehicle III standards. This new LEV III standard applies to all vehicles under 14,000 pounds GVWR.

The Cummins 6.7L Turbo Diesel powers the Ram Heavy-Duty lineup, and is the first medium-duty diesel engine in the 8,501-14,000-pound GVWR segment to be certified to the new 2015 LEV III standards, according to Cummins.

Cummins was able to meet the more stringent requirements without hardware changes, according to Jeff Caldwell, General Manager - Pickup Business.



Under LEV III, the nitrogen oxide and non-methane organic gas standards are combined into a single NOx+NMOG standard, along with extension of emissions-useful life to 150,000 miles for emissions control systems. LEV III standards also introduce more stringent NOx+NMOG fleet average requirements, which phase in from MY 2015-2022 for all medium-duty vehicles. These new standards were adopted by CARB in January 2012.

Cummins began providing diesel engines to Chrysler in 1988, and has shipped over 2 million engines in the last 25 years.

This comes as Cummins implements its most comprehensive environmental sustainability plan ever. The plan, announced in early 2014, builds on past successes to address the company's biggest opportunities to make a positive environmental impact - from the materials it buys to its products in use. The plan also includes specific goals for Cummins to reduce its environmental footprint.

## **26. EPA Staff Says Agency Needs to Be Tough on Smog**

The Environmental Protection Agency's staff has concluded that the government needs to tighten smog rules by somewhere between 7 and 20 percent. In its final recommendation in a 597-page report, the agency staff agrees with EPA's outside scientific advisers that the 6-year-old standard for how much smog is allowed needs to be stricter, saying it will save a significant number of lives and cut hospital visits. An earlier version of the report came to a similar conclusion.

Industry representatives criticized the recommendation as way too costly, while environmental activists hailed it as a public health measure.

Since 2008, the standard has allowed up to 75 parts of ozone per billion parts of air. The staff report recommends between 60 and 70 parts per billion. The report says it will provide more health protection for higher risk populations, including the elderly, very young, outdoor workers and people with asthma and lung disease. And it estimated that there are tens of millions, if not more than 100 million people, in that at-risk category.

When the agency tried to make a similar rule a few years ago, it estimated it would cost up to \$90 billion a year, making it one of the most expensive environmental regulations ever proposed. After industry and Republicans in Congress criticized it, President Barack Obama withdrew it in 2011.

Ross Eisenberg, a vice president at the National Association of Manufacturers, said recently that the rule that staff recommends would cost up to \$270 billion a year. In a written statement, he said "the current standard of 75 parts per billion protects public health" and added that there is much "financial risk evident in this new regulation."

Industry for four decades has exaggerated the costs of cleaning up air, countered Frank O'Donnell, president of Clean Air Watch, saying the current rule is too weak.

"EPA's ultimate decision is literally a matter of life and death," said Bill Becker, executive director of the National Association of Clean Air Agencies, which represents state and local air regulators. "While the costs may be significant, the costs of inaction, including billions of dollars of health and welfare impacts are overwhelming."

A 2011 EPA study looked at the history of air pollution regulations and found that the benefit of clean air in better health and reduced deaths "vastly exceeds" the costs of air pollution rules going back to 1990. It said that by the year 2020, overall costs of air pollution rules would be \$65 billion a year, while savings would be worth almost \$2 trillion a year.

Federal law requires that air quality rules be updated every five years. A federal judge ordered the EPA to have a new rule by December after environmental groups sued to get the government to tighten existing rules.

### **27. DOE to Fund \$55 Million in Vehicle Efficiency, Electric Vehicle Projects**

The Obama administration has announced that it will give \$55 million to 31 projects that aim to improve electric vehicle technology and increase fuel efficiency for other vehicles.

Nineteen of the projects funded by the Department of Energy (DOE) are part of the Obama administration's efforts to reduce plug-in electric vehicle prices to the level of combustion vehicles by 2022.

"Investments in the next generation of vehicle technologies will both strengthen our economy and lead to a more fuel efficient, clean energy future," Energy Secretary Ernest Moniz said in a statement.

"Improving vehicle efficiency is instrumental to establishing a 21st century transportation sector that creates jobs as well as protects future generations from harmful carbon emissions." Specifically, the electric vehicle projects aim to develop battery technologies other than lithium ion, the dominant technology currently used for cars. Grant recipients will also try to make vehicle components lighter and reduce drivetrain friction.

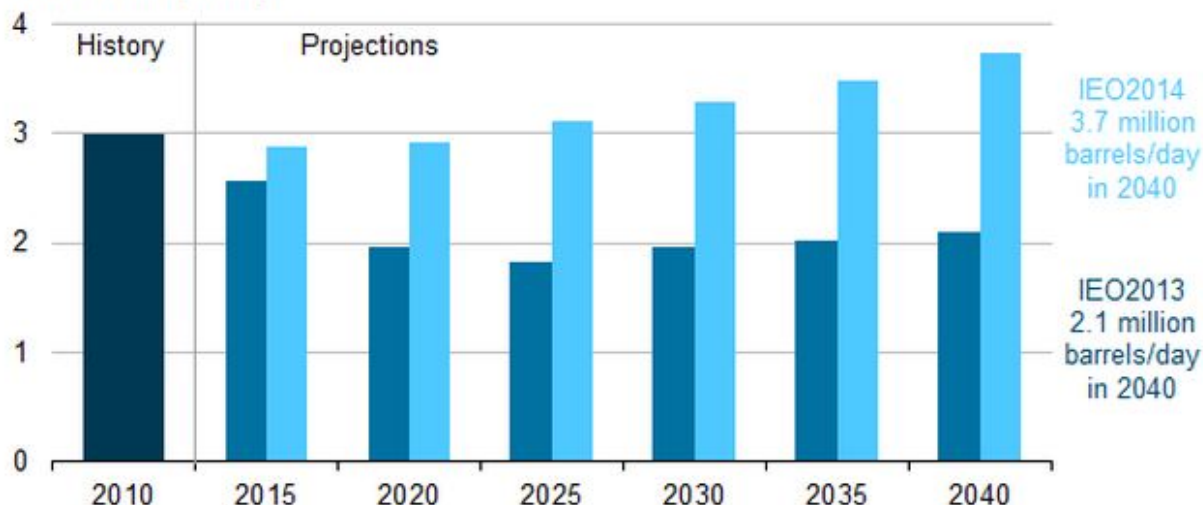
The U.S. Army is providing \$3.7 million for the electric vehicle grants, the DOE said.

Twelve of the projects the DOE is funding are aimed at improving the efficiency of vehicles that use gasoline or diesel. The department said grantees will work on dual-fuel technologies that reduce petroleum use, improving engine efficiency and getting advanced lubricants to market.

### **28. EIA: Energy Reform Could Increase Mexico's Long-Term Oil Production By 75%**

On August 11, Mexico's president signed into law legislation that will open its oil and natural gas markets to foreign direct investment, effectively ending the 75-year-old monopoly of state-owned Petróleos Mexicanos (Pemex). These laws, which follow previously adopted changes in Mexico's constitution to eliminate provisions that prohibited direct foreign investment in that nation's oil and natural gas sector, are likely to have major implications for the future of Mexico's oil production profile. As a result of the developments in Mexico over the past year, EIA has revised its expectations for long-term growth in Mexico's oil production.

## Mexico petroleum and other liquids production (2010-40) million barrels per day



Source: U.S. Energy Information Administration, *International Energy Outlook 2014* preliminary projections

The reform is expected to improve the long-term outlook for growth in Mexico's petroleum and other liquids production. Although there are many complexities to the new reform and many details that still must be settled before the reforms can take effect, reform is expected to improve the long-term outlook for growth in Mexico's petroleum and other liquids production. Analysis in EIA's upcoming International Energy Outlook 2014 (IEO2014) will include the potential effects on upstream oil exploration and production and the potential for foreign participation.

The changes in EIA's assessment of Mexico's liquids production profile are profound. Last year's International Energy Outlook projected that Mexico's production would continue to decline from 3.0 million barrels per day (MMbbl/d) in 2010 to 1.8 MMbbl/d in 2025 and then struggle to remain in the range of 2.0 to 2.1 MMbbl/d through 2040. The forthcoming Outlook, which assumes some success in implementing the new reforms, projects that Mexico's production could stabilize at 2.9 MMbbl/d through 2020 and then rise to 3.7 MMbbl/d by 2040—about 75% higher than in last year's outlook. Actual performance could still differ significantly from these projections because of the future success of reforms, resource and technology developments, and world oil market prices.

Since 2008, the contract structure for any private company partnering with Pemex was a performance-based service contract, which offered financial incentives to private contractors working in Mexico's upstream sector. Incentives were provided in some cases, such as when a project is completed ahead of schedule, when Pemex benefits from the use of new technology provided by the contractor, or when the contractor is more successful than originally expected. These contracts also include penalties for environmental negligence or failure to meet contractual obligations.

Mexico's legislation introduced three new contract types that will provide more opportunity for foreign investment in its energy sector:

- Profit-sharing contracts allow companies to receive a percentage of the profits resulting from oil and natural gas development. While companies entering into these contracts would not own the resources being developed, they would be allowed to include the revenue from their part of the estimated future profits.

- Production-sharing contracts allow companies to own title to a percentage of resource volumes as they are produced.
- Licenses allow participating companies to be paid in the form of oil and natural gas extracted from each project.

The production-sharing contracts and licenses will effectively allow foreign companies to account for reserves, which is a particularly attractive incentive for investment in Mexico's energy sector. Different contract types will likely be applied according to the degree of risk associated with specific projects. For instance, licenses will likely be used for projects that are very capital intensive and high-risk, requiring advanced technology, like oil shale or ultra-deepwater projects. Less risky onshore and shallow offshore projects would more likely use profit-sharing arrangements.

More details on EIA's projections for Mexico's oil production will be available with the release of the International Energy Outlook 2014.

## **29. CVMA Supports the Canada/United States Regulatory Cooperation Council Plan**

The Canadian Vehicle Manufacturers' Association (CVMA) is supportive of the "Joint Forward Plan" released by the Regulatory Cooperation Council (RCC), on August 29th, 2014. The Joint Forward Plan now frames the approach whereby Canadian and U.S. regulatory agencies will develop Regulatory Partnership Statements that will be the means for enhanced cooperation and joint regulatory development activity on an ongoing basis, providing even greater efficiencies for governments and industry that will ultimately benefit consumers. The RCC is to be commended for its success in developing the Joint Forward Plan. By institutionalizing the regulatory cooperation between regulatory agencies, the much needed process and mechanism for joint cooperation and alignment of future new regulations and policies will minimize the creation of regulatory misalignments and provide greater predictability for industry, said Mark Nantais, President.

The initial work plan of 29 initiatives launched in December 2011 was critical in establishing a much needed partnership arrangement and a framework for more bilateral cooperation, taking specific steps for joint cooperation and alignment of existing and future regulations. On a bi-national basis, CVMA and its member companies have been clear about their support for the RCC action plans, not just in the area of vehicle safety standards but also as the plans call for harmonization of Canadian and U.S. vehicle emissions standards, and substantial progress in harmonizing those standards has proven itself.

The Canadian Vehicle Manufacturers' Association is the industry association that has represented Canada's leading manufacturers of light and heavy duty motor vehicles for more than 85 years. Its membership includes Chrysler Canada Inc.; Ford Motor Company of Canada, Limited and General Motors of Canada Limited. Collectively its members account for 62% of vehicles produced in Canada, operate 5 vehicle assembly plants as well as engine and components plants, and have over 1,300 dealerships. 115,000 jobs are directly tied to vehicle assembly in Canada. Direct and indirect jobs associated with vehicle manufacturing are estimated at over 500,000 across Canada.

## **ASIA - PACIFIC**

### **30. Policy Shift Will Jolt New-Energy Vehicle Market**

China is increasing the number of new-energy vehicles in government and public institutions' fleets in order to boost their widespread use. These cars should account for at least 10% of all newly purchased vehicles in 2014, 20% in 2015 and 30% in 2016, according to a plan the National Government Offices Administration recently published on its website.

The plan says the percentage will grow each subsequent year. It also sets a higher ratio - 15% for this year - for the Beijing-Tianjin-Hebei region, and Yangtze River Delta and Pearl River Delta regions to alleviate air pollution.

New-energy vehicles include fully electric cars, plug-in hybrids and those powered by fuel cells.

The plan says that charging stations' low numbers are frequently mentioned as the reason for low public enthusiasm for new-energy vehicles. It says that the number of charging slots should not be less than the number of new-energy vehicles. It also stipulates that any newly built government or public institution parking lot should be equipped with charging facilities for new-energy vehicles. To achieve that goal, private capital has been invited to play a larger role in beefing up China's charging network.

The plan is the latest effort to boost such vehicles' popularity after the State Council decided to exempt them from the purchase tax, which currently stands at 10%, from Sept 1 to the end of 2017.

Statistics from the China Association of Automobile Manufacturers show that 20,692 new-energy vehicles were produced and 20,477 sold in the first half of the year, more than double the figure from the same period last year.

Ouyang Minggao, a professor at Tsinghua University and head of the nation's energy-saving and new-energy vehicle program, said sales could hit 100,000 units in 2014 as several new models are set to arrive by year's end.

The domestic alternative energy vehicle industry is "not mature" and includes "relatively weak" brands, so new subsidies will mostly support domestic manufacturing—not imported cars, "including Tesla and other foreign companies"—said Su Bo, deputy director of the Ministry of Industry and Information Technology, according to a broadcast from state-run China National Radio.

China's goal of having 500,000 new-energy vehicles on the country's roads by the end of 2015 is in danger of falling way short, with only around 70,000 now being used, mostly by government agencies and in bus and taxi fleets, according to recent government statements.

On July 17, a report from state-run Xinhua news agency said Hebei province will install 16 charging stations along its major highway segment connecting Beijing and Shanghai.

### **31. Beijing Shuts Big Coal-Fired Power Plant to Ease Smog: Xinhua**

Beijing has closed the first of four large coal-fired power plants set to be de-commissioned as part of the city's efforts to cut air pollution, official news agency Xinhua has reported, citing the local planning agency. Xinhua said the authorities had shut down the Gaojing Thermal Power Plant's six 100 megawatt generating units. The plant is owned by the China Datang Corporation, one of China's big five state power firms.

In the face of growing public anger about persistent smog in the Chinese capital, the government has been under intense pressure to cut coal use and relocate industry.

Beijing's three remaining coal-fired power plants are all to be closed by the end of 2016.

The city is planning to reduce coal use by 2.6 million tonnes this year and a total of 9.2 million tonnes by the end of 2016, leaving its annual consumption at less than 10 million tonnes by 2017. It plans to fill the gap filled by building new natural gas-fired power stations and bringing in electricity from other provinces.

The city is also introducing tougher new fuel standards. It said earlier this year it would draw up new plans to ease traffic, which may include a congestion charge.

Average readings of tiny airborne particles that are hazardous to health, called PM2.5, reached 91.6 micrograms per cubic meter in the first half of 2014, down 11.2 percent year on year, official data from the Ministry of Environmental Protection showed.

The figure stood at an average of 89.5 mcg per cubic meter last year, and Beijing plans to bring it down to 60 mcg by 2017.

In 2013, PM2.5 concentrations in 74 cities monitored by the Chinese authorities averaged 72 mcg per cubic meter, more than twice China's recommended national standard of 35 mcg.

The Beijing Municipal Research Institute on Environmental Protection said earlier this month that Beijing was likely to reach the recommended standard by 2030 at the earliest.

### **32. Beijing to Enforce Use of Clean Coal in Anti-Pollution Drive**

Beijing will implement strict controls and targets for airborne sulfur from coal, Xinhua said, citing the Beijing Municipal Administration of Quality and Technology Supervision. This is the first time China has enforced the use of low-sulfur coal across all industries to tackle pollution.

Beijing has previously established an array of laws and rules to battle the environmental consequences of three decades of unchecked growth, but weak monitoring and punishment make it tough to get powerful industrial interests to comply.

China unveiled plans at the end of last year to slash coal consumption and close polluting mills, factories and smelters to cut air pollution. Beijing has also been pushing the country's steelmakers and power plants to buy higher-quality raw materials to meet tougher pollution targets.

### **33. Shanghai's New Air Pollution Law Is 'China's Strictest'**

Bonfires and straw burning are being banned in Shanghai under what an official has called "China's strictest air protection law." The new legislation, recently passed by lawmakers and to be introduced on October 1, aims to tackle pollution caused by burning items such as leaves, straw, plastics, rubber and tar.

At present, straw burning is only prohibited near airports, roads and certain other areas. Around 10 percent of Shanghai's pollution is said to be caused by straw burning in the city's suburban areas.

Figures are not available for the percentage of pollution caused by bonfires. Anyone found burning materials on bonfires will face a fine of up to 20,000 Yuan (US\$3,229) under the law. Farmers burning straw will be fined 200 Yuan.

While Shanghai introduced an air protection law in 2000, with an amendment in 2007, it has long lagged behind new challenges to the city's air quality, said Ding Wei, director with the legal commission of the Shanghai People's Congress. Ding said the new law is the strictest in China.

In part, that is due to harsher punishments for polluters with no upper limit on some fines.

And under the new law, businesses found polluting the city's air will be fined daily until they meet standards, Ding said. "We'd like to fine violators to bankruptcy, if necessary, to deter them from polluting the air," Ding told a press conference after the law was passed.

Polluters also face having power and water supplies suspended, and afterward incur higher electricity and water charges.

**In another clause, the owner of any motor vehicle or ship can be fined on the spot if polluting black smoke is spotted in emissions. Residents are urged to report incidents, Ding said.** According to earlier reports, vehicle and factory emissions account for 50 percent of the city's air pollution, followed by dust from construction sites (10.5 percent), power stations (7.3 percent) and straw burning (10 percent). The remainder was said to be from other provinces.

Under the new law, Shanghai will work with other Yangtze Delta cities to fight air pollution, Ding told Shanghai Daily. They will share daily air quality forecasts and crack down on straw burning on their borders.

In 2013, Shanghai recorded 124 polluted days.

#### **34. Shanghai Looks to Bring Secondhand Car Plates Sales into Auction System**

Secondhand car plates are set to be included in the city's auction system as currently they sell privately for almost 50,000 Yuan (US\$8,070) more than new ones. While new plates cannot be sold for three years, this price gap has seen motorists with license plates try to buy a new set at auction, then sell their old ones for a big profit.

Officials hope that ending this practice will increase the chances of bidders with a genuine need for a city plate being successful. Currently, demand is almost 20 times supply.

"This is one of the reasons," Shanghai Transport Commission spokesman Huang Xiaoyong told Shanghai Daily. "New policies will be introduced as soon as they're ready." Huang said a detailed plan is being formulated and gave no date for a launch.

At present, Shanghai's secondhand car plates trade privately for up to 120,000 Yuan. In comparison, at last month's auction of new plates, the average successful bid was 73,896 Yuan. A price ceiling introduced last year for new plates has reined in their prices.

Under new car plate auction rules issued by Shanghai government last month, the city is to build up a centralized management system for in-use plates. The transport commission said that means the city's secondhand car plates can now be better managed. But for now at least, an unregulated market is booming.

A secondhand plate agent told Shanghai Daily that he was willing to pay 98,000 Yuan for a private plate. "The price is only for today. If you come back in a few days' time, the price will be different. "We've heard that new policies are being introduced," added the agent.

Agents can sell on plates for between 100,000 Yuan to 120,000 Yuan.

Shanghai's government has introduced two new rules in an attempt to reduce the number of bidders at the monthly car plate auction. This came on the same day as the number of bidders reached 135,677 — dragging the success rate down to an all-time low of 5.5 percent.

From next month, only holders of driving licenses can bid, and those who are successful cannot take part in the auction again for three years. "We want the car owners who really need the plates to get a better chance in the bidding," said Huang Xiaoyong, spokesperson of the Shanghai Transport Commission. "We've been studying policies for long time to try to find a way to better regulate the market. This policy should benefit those with a genuine need."

Huang said the authority has no plans to remove the 72,600 Yuan (US\$11,672) first-round bid price ceiling for private plates.

The new rules follow a wave of panic bidding from April after the city raised its emission standards to the National V. That led to a 50 percent increase in bidders, as April was the last chance for owners of out-of-town registered National IV cars to change to a Shanghai license plate.

Afterward, numbers continued to rise.

According to Shanghai International Commodity Auction Co, the number of bidders at yesterday's auction was up 21,556 from last month. This was even though for the first time the auction prohibited people holding temporary residence permits in Shanghai from participating — a group that usually accounts for 10 percent of bidders.

Plate supplies remained at 7,400 for private owners, pre-set by the city government out of a 100,000 quota for the year.

The average winning price this month was 73,896 Yuan — down 607 Yuan from last month. The lowest bid dropped 600 Yuan to 73,800 Yuan.

While prices have stabilized after huge hikes last year, the increasing difficulty in landing a car plate has seen agencies offer their services to desperate motorists. Experienced bidders place bids for clients at times, they say, when data transmits better. Fees range from 4,000 Yuan to 10,000 Yuan.

Meanwhile, the fact that more than 100,000 bidders are failing to secure a plate each month has raised questions about how the auction entrance fee of 100 Yuan — some 10 million Yuan a month — is used. The Shanghai Transport Commission said the money is spent on bidding software development and upgrading and maintaining the servers.

### **35. Overgrown Beijing Slaps New Limits on Industry in Bid to Cut Smog**

In a list of restrictions published on its website ([www.beijing.gov.cn](http://www.beijing.gov.cn)), the municipal government said it would ban the further expansion of a wide range of industries, including food processing,



textiles, construction materials, paper making, chemicals and oil refining. It said in an accompanying statement that the list had been drawn up to serve the capital's plans to restructure its economy and promote integrated development with the neighboring regions of Hebei and Tianjin.

Beijing has been under heavy pressure to end its obsession with industrial growth, which has not only left the city choking with smog, but also deprived poverty-stricken surrounding regions of the opportunity to improve their economies. "Constantly-developing Beijing is now facing a series of problems, including overpopulation, congestion, water shortages and air pollution - these deep-rooted problems are related to the fact that the city has too many functions, and its economy is too big," the statement said.

The city's economy grew 6.5 times from 1998 to 2012, researchers have estimated, while its population grew by two thirds, energy consumption doubled and the number of vehicles on its road tripled over the period.

Beijing has already been moving hundreds of industrial enterprises to Hebei to ease pollution and congestion. It has also started closing down coal-fired power plants with the aim of cutting average daily air pollution by a third by 2017.

China is considering plans to create a "super-region" around Beijing by relocating industries, improving transportation, breaking down administrative barriers and setting unified industry standards.

It is also planning to relocate some non-essential government functions to Hebei and is studying a proposal to relocate as many as 5 million people outside of the city, according to local media reports.

The new policy will also impose restrictions on new real estate projects, including bans on the construction of large-scale hotels, schools, office buildings and hospitals in "core districts", the city government said.

### **36. IBM Signs Up To Help Fight China's War on Smog**

After a series of pollution scares and scandals, China's central government has promised to reverse some of the damage done to the nation's sky, rivers and soil by more than three decades of growth. But China has first had to improve data collection, monitoring and forecasting capabilities before it can work on cutting smog and pollution.

Beijing city already uses an alerting system based on data from 35 monitoring stations, allowing it to shut schools and factories and cut traffic three days in advance, but residents still complain that not enough is being done.

"Predicting is helpful because it helps prevent exposure, but it is not enough if it is only about knowing which days to put on masks or stay indoors," said Ma Jun, director of the Institute of Environmental and Public Affairs, a non-government group that works to improve emissions data transparency.

Under the agreement with IBM, Beijing's city government will be one of the partners in the company's China-focused 10-year "Green Horizon" initiative, which aims to draw on IBM's forecasting expertise and the collection of real-time emissions data to predict smog build-ups. "It

is about how we can help cities improve management based on 'Big Data', and better predict (pollution) with accuracy so the government can take proactive action," said Xiaowei Shen, China director of IBM Research, speaking at IBM's lab in Beijing's northwest high-tech district of Zhongguancun.

With China committed to reducing the share of coal in its energy mix, IBM's cloud-based analytic systems could also be tailored to make better use of renewable energy, Shen said. At the Zhangbei wind and solar power demonstration project run by the State Grid Corp in northern Hebei province, for instance, a supply and demand management system from IBM has helped reduce wasted power to just 20 percent from 30 percent.

Better data about the make-up of the Beijing's pollution could also lead to more effective action, said Wang Tao, resident scholar at the energy and climate change program at the Carnegie-Tsinghua Center for Global Policy. "They can find out if stopping cars running is more effective, or stopping pollution from heavy industries," Wang said.

IBM representatives said the Green Horizon initiative could generate new commercial opportunities in pollution control and renewable energy in China.

### **37. Anti-Smog Gains Marred By Rising Ozone Levels**

China's air quality improved slightly in the first half of 2014 compared with the same period in 2013, but aggravated ozone pollution became a prominent problem across the country, according to Environmental Protection Ministry figures just released.

In 74 major cities, air quality was good 60.3 percent of the time from January to June. The figure was 58.7 percent during that period in 2013. In addition, the frequency, duration and pollution concentration of severely polluted days all decreased this year. A ministry official who wished to remain anonymous said the improvement came from tougher policies adopted after the Airborne Pollution Prevention and Control Action Plan was issued in September 2013, and more favorable weather conditions.

But the rising ozone level marred the overall improvement. Ozone concentration increased by 6.8 percent nationwide - it was as high as 12.8 percent in the Yangtze River Delta region.

Although ozone is beneficial in the stratosphere, blocking ultraviolet rays from reaching Earth, high ozone levels at low altitudes can irritate the eyes and irreversibly damage the lungs and central nervous system. Adding to the danger, ozone pollution is easily shrugged off by the public because it does not affect visibility, said Chai Fahe, vice-president of the Chinese Research Academy of Environmental Sciences.

Chai said ozone levels can be raised by natural conditions such as stronger sunshine and higher temperatures, and by manmade factors such as growing concentrations of nitrogen oxide and volatile organic compounds. "The total of nitrogen oxide emissions has just reached the peak, but VOCs are still increasing because they are just beginning to be controlled," he said.

The higher average temperature in the first half of 2014, compared with last year, is also likely a factor, he said.

Regionally, air quality improved in the Beijing-Tianjin-Hebei cluster, by 3.2 percent, in 2014. But it decreased by 0.5 percent in the Yangtze River Delta region, and by 0.8 percent in the Pearl River Delta.

"The results reflected the level of efforts made by the government bodies of the three regions," said Chai. "Policies being adopted in the Beijing-Tianjin-Hebei cluster are unparalleled in the nation."

But despite these efforts, eight of the 10 cities with the worst air quality in the first half of 2014 are in that region. The 10 cities were Xingtai, Shijiazhuang, Baoding, Tangshan, Handan, Hengshui and Langfang, all in Hebei province; Jinan in Shandong province; Xi'an in Shaanxi province and Tianjin.

### **38. China Boosts June Net Diesel Fuel Exports to Highest in Four Years**

China raised its net diesel exports to the highest level in four years as domestic demand trailed output growth amid a slowing economy.

Overseas sales of the fuel in the world's largest energy consumer exceeded imports by about 440,200 metric tons in June, according to data released by the General Administration of Customs in Beijing. That's the highest since May 2010.

"China is expected to export 300,000 to 400,000 tons of diesel a month regularly as domestic production grows faster than demand," Chen Li, an analyst with ICIS-C1 Energy, said by phone from Guangzhou. China's diesel demand is estimated to grow 0.3 percent to 1 percent this year, while output will expand about 1 percent, the Shanghai-based consultant said last month.

The nation may export a record 3 million tons of the fuel this year, exceeding the previous high of 2.87 million tons in 2010, ICIS-C1 said. China Petroleum & Chemical Corp.'s Tianjin refinery got a new diesel export quota this year, according to ICIS-C1.

China's imports of fuel oil, used as refinery feedstock and to power ships, fell 31 percent from a year ago to 1.4 million tons in June, the second-lowest this year. Purchases in May were 1.13 million, the lowest since at least 2003. Imports declined 32 percent to 9.8 million tons in the first half.

The nation's pipeline natural gas imports rose to a record high for a second month in June as supplies from Myanmar continued to increase, today's data show. Imports were at 2.1 million tons last month.

### **39. Experts Urge China to Detail Port Emissions**

China should establish emissions inventories for all major port cities as soon as possible to detail pollutants from ships and ports, experts have suggested. They say these pollutants may account for as much as 20 percent of the cities' airborne pollutants and have also called for the diesel fuel standard for ships to be strengthened to reduce pollution.

Ding Yan, deputy head of the Environmental Protection Ministry's vehicle emissions control center, said pollutants generated by ships and the port in Hong Kong contributed to more than 50 percent of the region's airborne pollution. "The proportion for some major port cities on the mainland, as some research has shown, can reach as high as 20 to 30 percent," Ding said.

He was speaking at a seminar held by the Natural Resources Defense Council, an international nonprofit environmental organization. A white paper from the organization on the prevention and control of shipping and port air emissions said pollutants generated by ships and ports include PM2.5 - particles smaller than 2.5 microns in diameter that can enter the lungs - PM10, nitrogen oxide and volatile organic compounds.

The white paper said the amount of PM2.5 emitted by a medium-sized container ship in one day is equivalent to that emitted by 500,000 cars running on diesel.

It said 70 percent of the pollutants are discharged within 400 km of coastlines and can reach up to 2,500 km inland.

David Pettit, a senior attorney at the council, said: "China is home to seven of the 10 busiest container ports in the world. The country's major port cities are also some of the most densely populated cities in the world, posing an even higher risk to public health."

He recommended that the central government set up a detailed emissions inventory for each major port city, as the United States government has. Ding, from the Environmental Protection Ministry, agreed, saying that funding and technology are needed to fulfill it.

Pettit said the US has also established an emissions control area under the International Maritime Organization. All international oceangoing vessels have to switch to low-sulfur fuel when berthing.

Ding said most of the vessels berthing at Los Angeles are from China. To meet the strict local standard, many owners have converted their ships to ensure compliance. "But they have to refuel in Singapore or Japan during the voyage because they can't find the low-sulfur diesel in China," he said.

Ding added that major fuel producers in China already have the technology, but don't have the incentive to produce the fuel because they set the standard themselves.

However, Ding's view was rejected by a staff member at Sinopec Group, one of the three largest oil producers in China. The employee, who asked not to be named, said the fuel standards, regardless of whether they are for vehicles or ships, are set after negotiations with vehicle users and producers, rather than being decided by fuel producers.

#### **40. Beijing Expects Healthy Air By 2030**

The Chinese capital's fine-particulate pollutant intensity is expected to drop to the internationally recognized safe level in 16 years, environmental authorities said. Pan Tao, head of the Beijing Municipal Research Institute of Environmental Protection, said the concentration of PM2.5 - particulate matter with a diameter of 2.5 micrograms or less per cubic meter - is likely to be reduced regularly to no more than 35 micrograms per cubic meter by 2030.

"Improving air quality in the city is not going to be an easy task," Pan said during the 2014 Beijing International Academic Symposium on Urban Environment. "It takes time and effort to turn the ship around."

The World Health Organization has said the concentration of PM2.5 should be no greater than 35 micrograms per cubic meter. Air quality with a higher intensity is considered unhealthy, especially for the old and young, and those with heart and lung problems.

The Beijing Environmental Protection Bureau said that the intensity of PM2.5 in 2013 was 89.5 micrograms per cubic meter - still two and a half times above the standard. The bureau's recently released plan said the intensity of PM2.5 is to be reduced to 60 micrograms per cubic meter. The 2017 target is still harmful to people's health, but achieving the goal is challenging, Pan said.

The rapid expansion of Beijing, the population explosion and improper urban planning have hindered environmental improvements, he said.

"The current pollution emission is far beyond the environmental capacity in the city, and any adverse climate condition would easily result in smoggy days," he said. "The key to current air quality improvement lies in emission reduction."

To ensure that Beijing residents can enjoy cleaner air by 2017, governments in the area have been imposing harsh fines against polluting enterprises to reduce the region's notorious smog. Many companies, especially those with coal-fired boilers and cement plants, have been fined for excessive smoke exhaust, lacking or having faulty emission-monitoring facilities and leaving coal dumps uncovered in the past few months, the Beijing Environmental Protection Bureau said.

The amount of sulfur dioxide in Beijing's air has been reduced 77 percent since 1998, while nitrogen dioxide has been cut by 30 percent and PM10 by 42 percent, the research institute said.

#### **41. China's Power Plants Punished For Dirty Tricks**

Ten thermal power plants across China have been fined for dodging supervision on sulfur emissions, according to the National Development and Reform Commission (NDRC). Penalties totaling 519 million Yuan (84.4 million U.S. dollars) were handed down after investigations into the operation of sulfur-removal devices in coal-fired plants.

Price and environmental protection authorities found that some thermal plants deliberately shut down their sulfur-removal device to reduce costs or avoid pollution monitoring. To try to bring air pollution under control, China encourages coal-fired power generators to install devices to remove sulfur and other pollutants. Plants equipped with such devices receive government subsidies and are allowed to sell their electricity at higher prices.

Yangcheng International Power Generation Co. Ltd. in Shanxi province was fined the most, 125,588,000 Yuan (\$20 million), for failing to operate desulfurization facilities for the required amount of time at four of its coal-fired units last year. Those units ran the desulfurization technology—which is meant to operate constantly—only between 80 percent and 62 percent of the time the plants were functioning, the government said in a joint statement by the National Development and Reform Commission and the Ministry of Environmental Protection.

The next highest penalties were levied against Inner Mongolia Power Co. Ltd., at 17 million Yuan (\$2.7 million); and Donghua Baotou Thermal Power Co. Ltd., at 5,832,500 Yuan (\$939,000).

While only 10 coal-fired power plants were named, the government said it has levied a total of 519 million Yuan (\$84 million) in fines and penalties for violations of desulfurization rules across the country.

Nineteen facilities were publicly named in a similar audit in a June 12 announcement, though fine amounts were not disclosed at that time.

In a separate announcement, Beijing municipality said July 15 that it had levied 1.6 million Yuan (\$258,000) in fines against 96 facilities related to catering or construction in July, under air pollution control ordinances there, primarily for failing to treat waste gas.

The Ministry of Environmental Protection also released a list of all desulfurization and denitrification facilities installed at coal-fired power units and certain steel and cement production facilities.

#### **42. Air Quality Tops Public Environmental Complaints in China**

Air pollution is still public enemy number one in China's war against pollution, according to the country's environmental watchdog. Among the 696 complaints received by the Ministry of Environmental Protection in the first half of this year, 558 of the total, or 80 percent, were related to air quality, an 8.4-percent year-on-year increase, according to a ministry statement.

All the complaints were lodged through the telephone hotline "12369." Other major reasons for complaints were water and noise pollution.

The ministry said 474 of the complaints have been investigated, with problems confirmed in 382 cases, or 80.6 percent. Companies found responsible for the problems received punishments ranging from warnings to suspension, closure and fines.

"Some enterprises became involved in disputes because of a lack of planning in how industrial parks and residential quarters are located," said the statement.

In one case, it said, the Foxconn Industrial Park in Taiyuan City in Shanxi Province is located just across the street from a residential quarter. Though monitoring results show that the factory is discharging legally, residents still are affected by strange odors.

In other cases, big projects have caused outrage in neighborhoods by starting operations without passing an environmental impact assessment or paying fair compensation.

#### **43. Hong Kong Air Pollution Reaches 'Serious' Level on Storm**

Hong Kong's air pollution reached the "serious" level recently, the highest since June 14, as an approaching typhoon leads to smog, according to a government website. The pollution level was higher than normal as of 4 p.m., with the Air Quality Health Index reaching the maximum level of 10-plus at 6 monitoring stations, while most stations were at nine or higher, according to a statement on the government's website. The health risk categories "very high" or "serious," the statement said.

The light wind has hindered the dispersion of air pollutants and the high level of ozone has promoted the formation of nitrogen dioxide, particularly at street level, according to the press release.

“A continental airstream is bringing very hot weather to Guangdong,” according to the release. “The intense sunshine and high temperature enhanced photochemical smog activities and formation of ozone during the daytime, resulting in high background pollution in the region.”

The weather will still be very hot tomorrow under the influence of tropical cyclone Matmo’s outer subsiding airstream, and it is expected the pollution levels would still be higher than normal before then, according to the release.

Poor roadside air quality presents the biggest daily health threat to Hong Kong’s 7.2 million people, according to the government’s clean-air plan published last year. Nitrogen dioxide, mostly formed from vehicles in roadside areas, has been linked to damaged lung function in children and asthma attacks.

Hong Kong air quality improved overall in the first half of the year, but ozone rose to its highest level in a decade, in part because of pollution from mainland China, analysis by watchdog group the Clean Air Network shows. The analysis comes days after the Hong Kong Environmental Protection Department (HKEPD) admitted that it had published only abridged versions of two taxpayer-funded reports on air pollution in the Pearl River Delta at the insistence of Guangdong provincial environmental authorities it had cooperated with to produce the reports, one which specifically studied volatile organic compound (VOC) and photochemical ozone pollution.

The HKEPD had agreed with the Guangdong request to only publish short versions of the reports because of names and data directly associated with businesses in Guangdong. “We still don’t know about the exact formation of ozone [in Guangdong] because it is complicated, which is why we want to know more about the studies, since they were exactly related to ozone and VOC pollution,” said Kwong Sum-yin, head of the Clean Air Network. “We’ve found this [lack of disclosure] rather strange because over the past few years the mainland and Hong Kong governments have been more open and transparent about data and reduction targets.”

Locally in Hong Kong, ozone is less attributable to vehicles than in the past and comes more from printing industry sources, Kwong said. In Guangdong, ozone levels are largely from motor vehicles.

Analysis of the six-month data also showed levels of nitrogen dioxide slightly better than the same period in 2013 though exceeding new air quality objectives that the special administrative region officially adopted on January 1, with roadside levels generally two times higher than in other monitoring points.

Sulfur dioxide levels continued to fall overall but were highest at two portside monitoring points in Kwai Cheng and Tsuen Wan, which the Clean Air Network said indicated a “significant contribution” from marine vessel emissions. The Hong Kong government is working to mandate oceangoing vessels switch to fuels with less than 0.5 sulfur content at berth in the region’s waters and expects this to take effect early next year. “We know the government is really keen on pushing this,” Kwong said. “They are still saying that it will be ready this year to go into effect from January.”

Hong Kong is also discussing with the Guangdong government the possibility of establishing a larger emissions control area for Pearl River Delta ports. Ports in Guangzhou and Shenzhen have been working on implementing their own measures, including pushing for onshore power facilities in a Shenzhen port by sometime in 2017, where vessels could tap into power and not run engines at dockside, Kwong said.

Local and provincial governments, following a national air pollution action plan released by the central government last September, continue to roll out their own versions of the policy. In the past few weeks the Xinjiang-Uighur autonomous region in the northwest and the city of Dongguan in the Pearl River Delta have announced plans.

Xinjiang aims to improve air quality in all cities but is focusing on the capital of Urumqi, with a goal for a 25 percent cut in fine particulate matter (PM2.5) by the end of 2017 compared to 2012 levels. The autonomous region requires all coal-fired power plants, iron and steel producers, oil refineries, ferrous metal and coking facilities to install desulfurization units and for all coal-fired boilers to install denitrification technology.

Xinjiang will not approve any new production facilities for iron, steel, cement, aluminum or glass between 2015 and 2017, the government said, and will restrict new polysilicon and polyvinyl chloride production.

Desulfurization and denitrification technology involves removing sulfur dioxide and nitrogen oxides caused by these production processes. The technology has been widely mandated, if not fully operated or adopted, across China.

The city of Dongguan, with a population of over 9 million directly between the capital Guangzhou and the city of Shenzhen in south China's Guangdong province, announced a target to cut PM2.5 by 20 percent by 2017, compared to 2012 levels. The city will increase public bus fleets and restrict private vehicle ownership, with a goal of operating half of the buses on lower emissions fuels or hybrid fuel-electric power by the end of 2014, and 70 percent of the fleet by the end of 2017.

Dongguan also said heavily polluting industry such as iron, steel, chemical and others would need to upgrade or relocate out of the city by the end of 2017.

On July 15, Guangdong province announced draft plans for reducing overcapacity in the cement, shipbuilding, iron and steel industries, with a public comment period running to July 21. In June, Guangdong detailed its own air pollution action plans, with province-wide goals to reduce sulfur dioxide by 37 percent by 2017 compared to 2006 levels, maintaining nitrogen dioxide levels and reducing particulate matter pollution by 5 percent compared to 2006.

More strict goals for the Pearl River Delta region itself—which is one of the three key air pollution control areas under the national air pollution action plan—include a 62 percent reduction of sulfur dioxide levels, a 13 percent reduction of particulate matter and a 15 percent reduction of nitrogen dioxide.

#### **44. India Govt to Introduce Pollution Control Index for Measuring Air Quality in Cities**

Under fire for failing to tackle air pollution, the government is set to introduce a uniform air quality index as part of measures to address the menace across the country. The Central Pollution Control Board (CPCB) is preparing the index that will provide information on the quality of air in major cities based on eight parameters. Most developed nations, including the US, China and Britain currently have national indices.

"We are preparing a uniform national air quality index that would be easily understandable by a common man as against the present regime of measuring air quality, which gives values that are difficult for a common person to grasp," a senior scientist of CPCB said on condition of anonymity.



"For example, neither the particulate matter - PM 2.5 or PM 10 - nor their effects on human body are understood by a common person. Similarly, a common man would not know what nitrogen dioxide, sulfur dioxide or ozone is and what are their effects," he said.

"Any breach in the standards of these gases is understood in broad terms as being harmful. But how much a breach is harmful is not known. The new index will address this and provide complete information, even to a layman, on excesses and how much harm they can cause," the scientist said.

The index, an ambitious scheme, will provide detailed and comprehensive information on air quality, including categorization of the excess values of a given parameter, along with associated health risks for different kinds of individuals such as a healthy person, a sportsman or an asthmatic.

While in the existing system, any value in excess of a given standard is perceived to be equally threatening, different brackets for different range of values will be provided in the new format. Their health risks will also be explained accordingly. "The new system will be more participative and create more sensitization and awareness among people. It will have more severity and precision. By understanding how much of a measured value is harmful and what effects it would have on their health, people will take measures themselves, be it vehicular or industrial interventions," an official said.

The air quality index will also enable the central pollution board to carry out ranking of cities on the basis of air pollution. "We are in the process of fine-tuning the features of the index and expect to complete it by October," said a senior CPCB official.

The index will serve as a blueprint for the government in chalking out measures to curb air pollution in cities and also enable states to draft their own policies. The state pollution control boards and pollution control panels of UTs may incorporate features of the index and implement them in their jurisdictions, officials said.

At present, the CPCB monitors national air quality on the basis of eight parameters with short-term standards - PM2.5, PM10, nitrogen dioxide, sulfur dioxide, ozone, carbon monoxide, lead and ammonia - and four parameters with annual standards - benzene, benzopyrene, nickel and arsenic.

#### **45. Diesel Price Hike Not Passed On To Commuters: Minister**

Public transport fares in Tamil Nadu are among the lowest in the nation, and they have benefitted travelers immensely. Besides, there has been a marked increase in the operational efficiency of the State Transport Undertakings (STUs) in the past three years, Transport Minister V. Senthil Balaji informed the Assembly on Wednesday.

Replying to the debate on the demands for grants for the Transport Department, he said that despite the exorbitant increases in diesel prices effected by the Centre, the State government decided to absorb the additional burden of the STUs and spare the people. During 2013-14 and in the previous fiscal, a financial assistance of Rs. 500 crore each had been granted to the STUs to offset the increase in fuel purchase cost.

The eight State Transport Corporations commanded a fleet of 22,501 buses, including 1,817 spare buses. The number of scheduled services had increased from 19,110 in March 2011 to 20,684 in March last, covering 91.20 lakh km a day. Significantly, thanks to the steps taken in the past three years, the average fuel efficiency increased to 5.30 km per liter from the 2011 mark of 5.25 kmpl, he said.

Claiming that the passenger fares, even after a revision in November 2011, were among the lowest in the country, Mr. Balaji said the fares in the State were 42 paise per kilometer for ordinary category services, 56 paise for express/semi-deluxe services, 60 paise for super deluxe services, 70 paise for ultra deluxe, 90 paise for air-conditioned coach services and Re. 1.10 for Volvo services. These compared favorably with the fares across all categories of services in Andhra Pradesh, Kerala, Karnataka, Madhya Pradesh and Gujarat.

Eleven sites were identified across the State for commercial exploitation in the private-public partnership mode. These apart, eight sites were earmarked for constructing commercial complexes.

In reply to questions by A. Bhaskar of the DMDK, A. Soundararajan of the CPI(M) and M. Arumugham of the CPI on crews being forced to over-work, Mr. Balaji said they were not forced to work beyond duty hours.

The Minister said the tendering process was under way for initially introducing the Smart Travel Card Scheme in the Metropolitan Transport Corporation, Chennai. During 2014-15, the Tamil Nadu Transport Development Finance Corporation proposed to lend Rs. 400.44 crore for the purchase of 1,868 new buses, besides assisting in payment of motor vehicle tax and bonus for employees and other working capital totaling Rs. 1,495.55 crore.

#### **46. Petrol, Diesel Rates To Go Up In Goa from Next Month**

Goa Chief Minister Manohar Parrikar today announced that petrol and diesel rates would be hiked by Rs 2 and Re 1, respectively from August 1 in the state.

"We had reduced the petrol prices by Rs 11 when State government was sworn in. But now it is time to increase them," he said in the legislative assembly here.

The hike will bring additional revenue of Rs 7 crore a month. "We will divert this money into infrastructure development fund and use it for creating infrastructure," he said. "A total Rs 84 crore would be added to the fund annually through this hike."

The Chief Minister was speaking during a discussion on the budget.

Parrikar also announced that he would quit the office if garbage was not cleared from the roads in the state by December 19, 2015. "Give me time till December 19, 2015, and after that if you find any garbage on the roadside, I will quit the office," he said, announcing construction of three garbage treatment plants in the state.

#### **47. National Green Tribunal Concerned Over Rampant Air Pollution in Uttarakhand, India**

Concerned over rampant air pollution caused by industrial units in Uttarakhand, the National Green Tribunal (NGT) has constituted an expert committee to look into violation of prescribed

standards for emission by iron industries in the state. A bench headed by Justice Swatanter Kumar pulled up the Uttarakhand State Pollution Control Board (UPCB) for failing to monitor the industries causing air pollution which already have consent to operate.

"We are afraid that if this be the state of environmental check and control of pollution by the Pollution Control Board then less say the better," the bench said.

The tribunal had on February 18 directed the UPCB to close all industrial units in Jasodharpur Industrial Area (JIA) that are functioning without the consent of the board.

The green bench constituted a special inspection team consisting of the Environmental Engineer from the Central Pollution Control Board (CPCB), senior environmental engineer from the Uttar Pradesh Pollution Control Board (UPPCB) and officer from UPCB.

"This team shall conduct a surprise inspection of all eighteen industries carrying on the business of iron/foundry industries in that area and are allegedly found seriously polluting and it will be ensured that every industry which is inspected is operating at its optimum capacity," the bench said.

The tribunal also held that the inspection report shall clearly indicate the functioning of these units along with the stack and ambient air quality samples and the analysis be included in the report. "It shall also be stated as to whether the slag used by these industries is being stored and how it is managed," the bench said.

According to UPCB, out of 18 industries, 10 have been granted consents to operate till 2014-2015, while the other eight have not been granted consent and their applications are pending before the board.

The tribunal's order came while hearing a petition by Shiv Prasad Dabral who had alleged that several industries are operating illegally, without consent from the state pollution control board or an environmental clearance in JIA near Kotdwar. The petition had said that these industries are also major source of air pollution in the area and are a public health hazard.

The plea had alleged that the units have also been flouting industrial pollutant discharge norms by dumping the foundry slag on the banks of the Sigaddi Srot River.

#### **48. Water, Air Pollution: NGT Issues Notice to Meghalaya, India**

The National Green Tribunal's eastern zone bench has issued notice to the Meghalaya government over a Comptroller and Auditor General (CAG) report on air, water and environmental pollution in the state. Gauhati High Court had in 2012 taken suo moto action on the CAG report which had expressed concern over the pollution in the state and subsequently transferred the case to NGT.

A green bench comprising judicial member Justice P Jyothimani issued notice to Chief Secretary of Meghalaya, Secretary, Municipal Board and Secretary, Department of Health and listed the matter for next hearing on August 26.

It directed Meghalaya State Pollution Control Board (MSPCB) to file its latest status report on the industries situated in the urban areas and in respect of air and water pollution in the state. The

CAG report had said the ambient air quality of capital Shillong and the entire state of Meghalaya in general is "far from satisfactory", mainly because of emission of air pollutants from automobiles.

It had, further, said that the extent of pollution of air caused by 481 polluting industries was not monitored by the MSPCB and coal mining activities were carried on in the state without authorization.

#### **49. Tax Rises Hurt Diesel Car Ownership in New Zealand**

The government tax on diesel vehicles has now reached a level where it is no longer viable to own a diesel car for its economy, claims the boss of New Zealand's most popular diesel passenger brand. Hyundai New Zealand general manager Andy Sinclair was commenting on the effects on the latest increase in Road User Charges (RUCs), which came into effect on July 1. The owners of all light diesel vehicles now have to pay RUCs of \$58 per 1000 kilometers.

Many within the motor industry say this latest increase means a tipping point has been reached where it now costs the same - and in many cases more - to run a diesel-engined car compared to a petrol-engined equivalent. Considering the retail prices of diesel cars are usually several thousand dollars more than the petrol versions, the RUCs have now effectively killed off any financial benefits of diesel ownership, say the critics.

A quick estimation using Hyundai cars and the Government's own online RUC calculator underlines this. The calculation shows that the fuel cost of running diesel and petrol Hyundai i30 hatchbacks is now exactly the same, despite the fact the 1.6-litre diesel model's official fuel consumption of 5.6 L/100km is substantially less than the 1.8-litre petrol version's 6.9 L/100km. This means there is now no way a purchaser can earn back the \$4000 more it costs to buy the diesel version.

Hyundai has been the top-selling diesel passenger brand for the past eight years, and Sinclair said that the increase in RUCs will impact on sales. "Obviously when the cost of running any vehicle becomes more expensive, there is an impact on sales," he said.

"Things have probably reached a stage where motorists do not now buy diesels for their economy. They buy them because they like their drivability, the torque they offer." For that reason the increase in RUCs probably won't impact on sales of larger SUVs as much as they will the smaller passenger vehicles, he forecast.

This potential hit on sales of diesel-engined Hyundai product comes at a time when the South Korean brand is going gangbusters in New Zealand, with the company selling more than 1000 vehicles in a calendar month for the first time in June.

Hyundai is now in fourth spot overall, and third in passenger sales, in a new vehicle market that is continuing to outstrip growth predictions.

#### **50. Indonesia Overtakes Brazil in Forest Losses Despite Moratorium**

Indonesia's losses of virgin forests totaled 60,000 sq. kms (23,000 sq. miles) - an area almost as big as Ireland - from 2000-12, partly to make way for palm oil plantations and other farms, a study said. And the pace of losses has increased. "By 2012, annual primary forest loss in Indonesia was estimated to be higher than in Brazil," where clearance of the Amazon basin has usually accounted for the biggest losses, the scientists wrote in the journal Nature Climate Change.

Deforestation in Indonesia in 2012 alone was 8,400 sq. kms (3,200 sq. miles) versus 4,600 sq. kms (1,800 sq. miles) in Brazil, which has managed to reduce losses in recent years, it said.

"We need to increase the law enforcement, the control in the area itself," said Belinda Margono, lead author of the study at the University of Maryland and who also works as an official at the Indonesian forestry ministry. "The rainforests are the lungs of the planet. You have lungs to breathe and if you get rid of the lungs, the planet's going to suffer," said Matthew Hansen, a co-author of the report at the University of Maryland.

Indonesia imposed a moratorium on forest clearance in 2011, partly to slow losses that are ruining habitats of orangutans, Sumatran tigers and other wildlife. Norway has also promised \$1 billion to Jakarta if it slows forest losses. "It seems that the moratorium has not had its intended effect," the scientists wrote.

Trees absorb carbon dioxide, the main greenhouse gas blamed for causing global warming, as they grow and release it when they are burnt or rot. By U.N. estimates, deforestation may accounts for 17 percent of all man-made greenhouse gases. Other studies have also found large forests losses in Indonesia but Sunday's findings focus only on the most important virgin forests, excluding plantations that can re-grow quickly.

Norway, whose \$1 billion pledge is part of a plan to slow climate change around the world, said the findings strengthened reasons for the program. "The partnership constitutes a strong financial incentive," said Gunhild Oland Santos-Nedrelid, a Norwegian environment ministry spokeswoman. Oslo wants conservation to be economically attractive to landowners, rather than logging. She said forest losses in Indonesia may increase in coming months, with drought raising risks of fires.

So far, Norway has paid almost \$50 million to Indonesia to help set up new institutions to reduce deforestation, she said. Indonesia will only start to get large amounts of money if monitoring proves a slowdown in deforestation.

Norway, rich from North Sea oil and the most generous donor for preserving tropical forests, has a similar \$1 billion project with Brazil and other smaller programs with nations including Guyana and Tanzania.

### **51. Japan to Promote Fuel-Cell Vehicles Through Subsidies**

Japan is set to offer JPY2 million (\$21,000) in subsidies for fuel-cell vehicles as an attempt to promote hydrogen technology and fuel-cell cars. The decision comes as car manufacturers such as Toyota and Honda are scheduled to launch their next-generation zero emissions hydrogen vehicles (called the Fuel Cell Vehicle and FCEV Concept respectively) from 2015.

With the subsidy, the consumers would pay about JPY5 million (\$52,500) for Toyota's fuel-cell sedan, which is set to go on sale by the end of March 2015 and priced at about JPY7 million.

The new technology uses hydrogen as fuel and run on electricity from cells that combine hydrogen with oxygen and emit only water vapor and heat, though some carbon dioxide is emitted when hydrogen is produced from hydrocarbons.

According to Reuters, Japan's Prime Minister, Shinzo Abe said: "This is the car of a new era because it doesn't emit any carbon dioxide and it's environmentally friendly. The government needs to support this."

However, it is being reported that industrial experts are doubtful about the technology because building up infrastructure of hydrogen fuel stations are expensive.

## **52. Japan Says it Destroyed Record Amount Of Ozone-Depleting Gases in Fiscal 2013**

Japan destroyed nearly 4.5 million tons of three leading ozone-layer depleting gases in fiscal 2013, a record high for the country, the Ministry of Environment has announced. In the fiscal year ending in March, Japan destroyed 4.469 million tons of chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs). It had destroyed 4.439 million tons in fiscal 2012.

Under the Montreal Protocol on Substances that Deplete the Ozone Layer, CFC production was abolished in 1995 in developed economies and HCFC production is to end in developed economies by 2019.

Japan sanctioned compulsory regulations on ozone layer depletion gas collection and adequate disposal under the CFC Collection and Destruction Law in 2002. Home, office and other professional-use cooling and refrigeration equipment and automotive air-conditioners that use the three gases must be collected and their gases properly destroyed under the law.

At the end of every fiscal year, government-designated and certified businesses for handling the three gases must submit collection and destruction data to the government. There are approximately 30,000 businesses certified to collect the gases and 71 ozone gas destruction operators in Japan, according to the ministry.

## **53. Japan Tightens Standards on Ballast Water Release, Cuts Sulfur Content in Ship Fuel**

Japan will enforce new regulations on the ballast water discharge of oceangoing ships to prevent the release of hazardous content into the sea, the Ministry of Land, Infrastructure and Transport said July 10. The new regulations follow the passage of amendments to the Law on Ocean Contamination and Maritime Disaster Prevention in the parliament session that ended in June, an official of the Ministry of Land, Infrastructure and Transport's Maritime Policy Division said July 11.

Another regulation, based on the MARPOL Convention Annex VI, will require that sulfuric content of bunker fuel of vessels traveling the Baltic Sea, the North Sea, North America and the Caribbean, be less than 0.1 percent, a fraction of the 1 percent limit under current Japanese rules.

The ministry official said ship-owners will pay substantially more for low-sulfur bunker oil.

Most Japanese flag carriers and Japanese carriers of convenience—ships that carry non-Japanese flags—would be required to abide by the new low-sulfur bunker fuel rules, he said.

The amended ordinances for both ballast water and bunker fuel sulfur content will be enforced beginning Jan. 1, 2015, according to the statement.

#### 54. Exhaust Fumes Take Toll on HCM City Air Quality

Air pollution has been a serious problem in HCM City for a long time now, but polluters face no serious punishment because of a toothless Environment Law and lack of adequate equipment to measure the pollution they cause, according to reports.



Exhaust fumes from vehicles, industry, and construction impact air quality the worst.

According to the latest study, air quality in six out of the city's 12 industrial and processing zones — Cat Lai, Linh Trung 1 and 2, Tan Binh, Tan Tao, and North-western Cu Chi — has worsened since last year.

Exhaust fumes have become a very worrisome issue, with the pollution they cause exceeding permissible levels in most categories.

The rapid growth in the number of vehicles has also sharply worsened noise pollution. "HCM City is one of the noisiest cities in the world," Assoc Prof Nguyen Dinh Tuan, former principal of HCM City's Natural Resources and Environment University, was quoted as saying in Sai Gon Giai Phong (Liberated Sai Gon) newspaper. On all major roads, noise levels were found to exceed permissible levels.

According to Prof Nguyen Van Phuoc, head of the Natural Resource and Environment Institute, since 2005 Viet Nam has been applying Euro 2 standards for vehicles, but enforcing them has been very hard because of the shortage of testing equipment.

Inspectors from the city Department of Natural Resources and Environment also admitted that controlling emissions from factories is also becoming more and more difficult since many of them occur at night.

Most of the city's automatic air pollution measurement stations are not functioning any longer but have not been repaired. Pollution measurements are therefore crude and lack credibility, making it hard for authorities to find solutions. "To mitigate the air pollution, the most important thing is to set up a 24-hour automatic air measurement system around the city," Tuan said. "From that system, a trustworthy database for air pollution can be set up, and causes as well as solutions sought."

The city has approved the setting up of a new system.

Phuoc said: "The local community should be mobilized to improve air quality because residents suffer directly. The community must be involved in the environment management system." He wanted the public to take part in managing the environment.

Information and figures related to air pollution should be publicly announced to enable the community to become aware of air pollution and the need to protect the environment, he added.

### **55. API Nearing Unhealthy Level in Sibuloh, Malaysia**

SIBULOH: The air quality here is nearing a very unhealthy level with air pollution index (API) reading at 176 as at 1pm yesterday, prompting the Health Department to monitor the admission of people with respiratory diseases. State health director Datu Dr Zulkifli Jantan said yesterday schools will be advised to close when the API hits 200.

He was asked if the department anticipated a hike in asthma cases and respiratory related illness here following the deterioration of air quality, the most unhealthy in the country. "We don't expect a spike. There may be a little increase as in the past.

"Advice and alerts have been publicized," Dr Zulkifli told The Borneo Post.

The API reading on Saturday was just 110 but soared rapidly to 149 at 9am yesterday before climbing to 176 at 1pm.

Other areas in the country recording unhealthy air quality yesterday were Seri Manjung, Perak (108) and Port Klang, Selangor (116).

Dr Zulkifli advised the public here to refrain from outdoor activities such as jogging.

"Parents are also advised not to bring their young children outdoor to public places such as parks and so on. "Those needing to go out due to work or other commitments are advised to wear face mask," he said.

Meanwhile, other parts of the state recorded moderate air quality yesterday.

Bintulu recorded an API of 69, ILP Miri (58), Kapit (65), Kuching (58), Limbang (55), Miri (65), Samarahan (79), Sarikei (67) and Sri Aman (84).

An API reading of 0 to 50 is considered healthy, 51-100 (moderate), 101-200 (unhealthy), 201-300 (very unhealthy) and 301 and above (hazardous).



The Meteorological Department, meanwhile, forecast there would be no rain in the state this morning. Isolated showers are expected in the afternoon and night.

The temperature here hit 36 degrees Celsius yesterday, with people thronging shopping malls to get away from the scorching heat.

And thick fog was seen engulfing major roads leading to the town. In Pahlawan Road for instance, visibility was greatly reduced with safety-conscious drivers switching on lights. There was also reduced visibility along the Rajang River.

SRB Region Two assistant controller Christopher Chan advised boat skippers to reduce speed, especially when negotiating bends.

## **56. Air Quality in Asia Pacific**

Over 70 per cent of the estimated seven million air pollution-related premature deaths each year occur in Asia and the Pacific, with the majority in low and middle income countries of Southeast Asia and Western Pacific.

At the inaugural session of the UN Environmental Assembly (UNEA) last month attended by over 100 ministers and vice ministers, air pollution was identified as a top priority that requires immediate action by the international community and the governments. The adopted Resolution on air pollution calls Governments to formulate action plans, establish and implement nationally determined ambient air quality standards, and to establish emissions standards for their significant sources of air pollution.

Responding to this regional crisis and the call to action from UNEA, Japan's Ministry of Environment and UNEP announced a cooperation to tackle air pollution in the region. The Asia Pacific Clean Air Partnership will bring together multiple regional initiatives to provide clear policy options based on the best science to support action on air pollution across the region.

Asia and the Pacific region contain some of the world's most polluted cities. In some of the cities, particulate matter less than 2.5 micron in diameter (PM2.5), which is considered as the most harmful to health, is four times higher than the safe limit (25 microgram per cubic meter). Emissions of air pollutants including CO<sub>2</sub> and black carbon, is expected to rise as economies continue to grow and energy use escalates. Increasing reliance on fossil fuels, coal-fired power plants, cars and the use of biomass for cooking and heating are identified as main causes of the spread of air pollution in this region.

"Environmental problems caused by unrestrained growth are becoming so severe that they are threatening to diminish development gains. Nowhere is this more clearly seen than with air pollution and the serious health and economic costs it is imposing on the people of this region," said Kaveh Zahedi, UNEP Regional Director & Representative for Asia and the Pacific.

Reinforcing air quality assessments that help determine gaps in countries' capacity to address air pollution are one of the aims of this cooperation. A science panel will be established to develop a science-policy synthesis report on air pollution with data segregated at sub-regional, and regional levels.

A Joint Forum will also be established comprising of various initiatives on air pollution to provide a platform for sharing latest scientific data, internationally agreed guidelines and relevant

information on atmospheric science to assist policy makers in setting targets to improve air quality in the region.

“Japan has been supporting air pollution related networks and science research for many years. Through this partnership we hope to encourage greater collaboration between the many regional initiatives and support information exchange between scientists throughout the region,” said Mr. Shinji Inoue, Senior Vice Minister, Ministry of Environment Japan.

The Asia Pacific Clean Air Partnership is an initiative launched by the UNEP Regional Office for Asia and the Pacific in cooperation with Japan’s Ministry of Environment. It will help the countries in the region manage air pollution, bringing with it multiple benefits from improved health, to food and water security, as well as climate change mitigation.

### **57. Sri Lanka Best in South Asia**

Sri Lanka ranked at the 69th place in the Environment Performance Index (EPI) Yale University which is a Global Environmental Assessment Index in terms of air quality management in the country. In South Asia, Sri Lanka is the best in air quality management according to above assessment, the Ministry of Environment and Renewable Energy says in a statement.

According to the Central Environmental Authority (CEA), the properly operating vehicle emission testing program and industrial emission control system are the key air quality management tools which brought the country this success. The CEA also announced that the promotion of low emission hybrid vehicles in the Sri Lankan vehicle fleet can further reduce the emissions from transport sector of the country will further to improve the air quality status in the country.

Meanwhile, Vehicles Importers, Association of Lanka and senior officers of CEA had had a meeting and had discussed the possibility of recommending a tax concession for importation of hybrid vehicles and thereby increasing the percentage of hybrid vehicles in Sri Lanka vehicle fleet by 20% in 2020. The CEA sources further revealed the participants to the meeting also discussed on development of fuel economy standards for Sri Lanka to further reduce the per capita emission in future.

### **58. Ahok Infuriated By Irregularities at Vehicle Emissions Test Center in Jakarta**

Deputy Governor Basuki “Ahok” Tjahaja Purnama, teamed up with Corruption Eradication Commission (KPK) commissioner Bambang Widjojanto, on Wednesday to inspect an emissions-test center in Kedaung Kali Angke, West Jakarta, and found several irregularities.

At around lunchtime, Ahok arrived in the area, where Bambang, city secretary Saefulloh and city inspectorate chief Franky Mangatas had been waiting for him, and together entered the center.

Ahok asked Jakarta Transportation Agency officials to try out vehicle-test equipment. However, most of the equipment did not function properly. He later asked the officials to conduct tests on a truck that he randomly picked. The officials tested the truck manually.

The deputy governor proceeded to inspect the cashier, where he found cash totaling Rp 8 million [US\$695.19]. He also discovered that officials wearing Transportation Agency uniforms were not actually civil servants.

Ahok was infuriated. "Get rid of them. Even if they are civil servants, just remove them. They deserve it," he said.

Ahok also bombarded the officers with questions regarding emissions tests, after which he learned that only 11 of 500 vehicles tested that day had failed the tests.

"How come only 11 vehicles out of 500 failed the tests while you conducted the tests manually? How would you know that the remaining vehicles were actually in proper condition?" he said.

Following the inspection, the city administration decided to temporarily shut down the Kedaung Kali Angke emissions-test center to launch an investigation. "We will shut down the center as of today so anyone hoping to test their vehicle in this center today should cancel it. These are such dubious tests. They might be delaying the issue of the test results or the approval, hoping for bribes," he said.

The official test fee for a vehicle is set at Rp 87,000 but in reality a vehicle owner may have to pay between Rp 200,000 and Rp 400,000.

"I want dodgy officials removed. If they file a lawsuit, we will face them. We will follow the money and report it to the police or to prosecutors," Ahok said, adding that he would instruct Jakarta Transportation Agency head M. Akbar and his deputy Benjamin Bukit to inspect all emissions-test centers in Jakarta.

Bambang said the impromptu joint inspection was part of a program by the city administration and the KPK to enforce good governance. "We are carrying out our supervisory function," Bambang said.

He pointed to several discoveries made during the inspection. "Between 80 percent and 90 percent of the equipment was not functioning and the tests were not reflected in the results. I also saw structural problems because the centers used to be jointly managed by the city administration and cooperatives but eventually the management was transferred to the city. However, since it was transferred to the city, a lot of the equipment has been broken. Many of the workers here are apparently outsiders," he said.

Bambang also found fraudulent practices which involved large sums of money. "There were illegal levies of between Rp 100,000 and Rp 200,000 per vehicle so if today they tested 500 vehicles, there would be around Rp 2.5 billion in illegal levies circulating. That's huge," he said.

Bambang said the KPK would follow up the preliminary findings and launch an investigation to dig deeper into the illegal practices found in the emissions-test process.

"We will submit our findings and recommendations to the city administration four weeks from now. The rest will be up to the city administration," he said.

## **59. Only 9 Chinese Cities Pass Clean Air Test**

If you are looking for a Chinese city with clean air, your best bets would be Shenzhen, Zhuhai, Zhoushan, Zhanjiang, Yunfu, Beihai, Haikou, or Lhasa, according to the Ministry of Environmental Protection. Those are the only nine out of 161 monitored cities that met China's new air quality standards in the first half of this year, the ministry has announced. The stricter standards were

rolled out by the government in 2012 as part of a continuing battle with air pollution in the country, the state news agency Xinhua reported.

A street scene in Beijing, where 20 million residents regularly experience unhealthy levels of pollution.

Chinese leaders have vowed a “war” on pollution as one of its most visible forms, smog, regularly envelops the country’s major cities, particularly in the north. Health officials warn that exposure to fine particulate matter, known as PM 2.5, can lead to

serious health problems.

One city that did not meet the air quality benchmark was the country’s capital, Beijing. The city’s 20 million residents — migrant workers and government leaders alike — regularly experience unhealthy levels of PM 2.5 and other pollutants.

In January 2013, Beijing residents endured particularly choking air with a concentration of fine particulate matter 40 times the recommended maximum exposure limit set by the World Health Organization.

The municipal government recently announced its latest measure to curb pollution. (See story below) In a statement on its official website, the Beijing Municipal Environmental Protection Bureau said the capital would ban the use of coal in six districts and neighboring regions by the end of 2020. Other high-polluting fuels, such as petroleum coke, and some biomass fuel will also be banned. Electricity and natural gas will be promoted for heating and cooking instead.

Last September, the Chinese government announced a nationwide plan to curb air pollution that included a goal of reducing overall coal consumption as a percentage of energy use. Some critics of the initiative voiced disappointment that the plan did not set specific limits on coal use by region.

China accounts for roughly half of the world’s annual coal consumption, the burning of which creates pollutants like fine particulates and greenhouse gases like carbon dioxide.

But a ban on coal in Beijing alone will not put much of a dent in China’s overall coal use, because Beijing is “a very minor coal-consuming region,” Rohan Kendall, the China consulting manager at Wood Mackenzie, a consultancy, said in a telephone interview with the press. “Total coal consumption in China is more than four billion tons annually, of which Beijing consumed only 15 million tons last year,” Mr. Kendall said, adding that Beijing receives most of its energy, and pollution, from neighboring provinces. He said he doubted that many other cities would emulate Beijing’s plan. “Coal is just too important for China,” he said.

China will strengthen air pollution control in its capital Beijing during the APEC senior officials' meeting this month through stricter emergency actions in the event of a pollution warning, China Daily reported.

Beijing is hosting the Third Senior Officials' Meeting and related meetings of the Asia-Pacific Economic Cooperation in Beijing from Aug. 6 to 21, including some 100 sessions covering topics such as trade, investment, agriculture, food and anti-corruption.

The city will launch tougher, comprehensive measures to control air pollution for the events, said Yao Hui, deputy director of the Beijing Environmental Protection Bureau, adding that updates on air quality will be issued and sent to the public quickly if air quality worsens.

If the air quality index is expected to top 200 for three consecutive days, an orange alert, the second highest in China's four-level warning system, will be issued, but the city will put into place pollution control measures usually called for under a red alert, the highest level, the report said.

Such measures include banning the use of 70 percent of government vehicles and restricting the use of private vehicles based on even- and odd-numbered license plates, among others.

Beijing has yet to issue a red alert for air pollution since the emergency plan was put into effect last November.

#### **60. Beijing to Ban Coal Burning as Part of Fight Against Air Pollution**

China's capital will ban the burning of coal in inner-city Beijing in 2015 and extend the ban on coal and other high-polluting non-vehicle fuels across the city and major suburbs by the end of 2020. The ban affects six major districts in the Beijing municipality, the municipal environmental protection bureau (BJEPB) announced on August 4<sup>th</sup>.

Burning of coal, heavy fuel oil, wood, straw and other biomass will be restricted on a staggered basis. The Dongcheng and Xicheng districts, which are in the heart of Beijing, will begin implementing the full ban by the end of 2015. The Shijingshan district will implement the ban by the end of 2017, followed by the Chaoyang, Haidian and Fengtai districts by the end of 2020, the BJEPB said.

The notice said 80 percent of urban areas in 10 suburbs also would be required to implement the ban by the end of 2020.

Coal-fired power plants now account for about a quarter of locally generated electricity in Beijing.

"Beijing's own experience, and air pollution control experience abroad, shows adjusting and optimizing the energy structure is an effective way to improve air quality," Liu Wei, deputy director of the atmospheric environmental management department of the BJEPB, told state-run Xinhua news agency on August 5<sup>th</sup>.

China, by far the largest consumer of coal in the world, has set a national goal of cutting coal use to 65 percent of energy production by the end of 2017.

#### **61. Beijing Sees Some Improvement in Emission Levels for SO<sub>2</sub>, NO<sub>x</sub>**

Beijing reported declines in the levels of sulfur dioxide and nitrogen oxide emissions in the first half of 2014, an incremental step in addressing some of the world's most polluted urban air. Sulfur dioxide emissions declined 5.43 percent, and nitrogen oxide emissions were down 7.59 percent compared with the first six months of 2013, the Beijing municipal environmental protection bureau (BJEPB) said on August 12<sup>th</sup>.

The BJEPB did say that coal consumption fell by around 7 percent in the first half of the year in Beijing, and that 176,000 older vehicles that do not meet new fuel efficiency and tailpipe emissions standards were taken off the roads.

Beijing had set a goal for reducing sulfur dioxide and nitrogen oxide emissions each by 5 percent compared with annual amounts in 2013, under an updated local air pollution action plan that started March 1.

A BJEPB official said in a statement that “although there was good progress in the first half of the year in reducing total emissions, the [air pollution] situation is still grim” due to rapid increases in population in certain districts, and that there is still too much coal used for home stoves and heating. The official said the municipality would continue to increase the elimination of older vehicles, encourage the use of alternative energy vehicles, and increase regulatory efforts to deal with industries with volatile organic compound emissions.

Beijing is integrating environmental policies with the neighboring state-level municipality of Tianjin and the province of Hebei. The regions are working closely on coordinating air pollution control policies after they were designated a national key air pollution control area in the China-wide air pollution action plan issued last year.

The Beijing municipal government said on August 9<sup>th</sup> that it has signed six cooperation agreements with Tianjin related to air pollution, water management, coal reduction and denitrification technologies to remove industrial nitrogen dioxide emissions at the source.

A proposal published by two experts from the State Council Development Research Center in state-run People's Daily newspaper on August 7<sup>th</sup> suggested that the three regions will need to establish a firmer legal basis for enacting joint regulations, and that they should adopt similar regulations on air, water and soil pollution.

## **62. EV, Plug-In Hybrid Output Soars Tenfold In July**

Sales of electric vehicles and plug-in hybrids have surged in China this year. And the companies that are driving the growth in green vehicles are private ones, not state-owned enterprises on which Beijing has placed high hopes. Some of the numbers:

- Automakers, aided by government subsidies, produced 5,799 electric vehicles and plug-in hybrids in China last month, ten times the total from a year earlier. Last month automakers built 3,728 EVs, 17 times the number a year earlier, according to the Ministry of Industry and Information Technology, the regulator of China's auto industry.
- Output of plug-in hybrid cars totaled 1,036 units. No plug-in hybrid vehicles were produced in July last year.

- Production of commercial EVs rose 85 percent year-on-year to 362 units, while commercial vehicles powered by plug-in hybrid powertrains surged 447 percent to 673 units.
- In the first seven months of this year, total production of electric vehicles and plug-in vehicles in China jumped 280 percent from the same period last year to 25,946 units.
- In the first half of the year, sales of electric cars and plug-in hybrids in China reached 20,477 units, a gain of 220 percent from the same period last year, according to the China Association of Automobile Manufacturers. The figure includes 11,777 EVs and 8,700 plug-in hybrids.

China now has 17 EV makers, many of which are major state-owned companies. But Kandi Technologies Corp., a Nasdaq-listed private company, alone sold 5,329 EVs in the first half, accounting for 45 percent of the national total. Kandi, in Jinhua of east China's Zhejiang province, is 50 percent owned by Zhejiang Geely Holding Group Co., the giant private carmaker.

China has only two main plug-in hybrid manufacturers -- privately owned BYD Co. and state-owned SAIC Motor Corp. BYD, partly owned by U.S. billionaire Warren Buffett, has established itself as a clear leader in the domestic plug-in hybrid market. The company sold 5,357 plug-in hybrids in the first half, contributing 62 percent of the total plug-in hybrid volume in the country.

Beijing started subsidizing EVs and plug-in hybrids in mid-2010. Since then, many private domestic companies and all state-owned enterprises have started developing the green vehicles. But private players are well ahead of their state-owned rivals in green-vehicle sales, apparently it all boils down to efficiency:

- In China, state-owned enterprises are overstaffed and their leaders are more responsive to government oversight than to consumer needs.
- Also, China's major state-owned automakers have been granted opportunities by the national government to form joint ventures with global brands and most of the joint ventures are profitable. Enjoying the profits generated by the joint ventures, these state-owned companies have less incentive than private players to develop their own products.

To date, no state-owned Chinese auto manufacturer has developed profitable car businesses on their own. They have also been slow to bring green vehicles to the market.

Consider Dongfeng Motor Corp., which runs profitable joint ventures with global automakers including Nissan Motor Corp., Honda Motor Co. and PSA Peugeot Citroen. The company claimed to have developed EVs a few years ago, but it didn't start mass production of its first electric car until June this year. By contrast, fully exposed to market competition after they were formed, private Chinese automakers have become more nimble players and work hard to market products that meet consumer demand.

Despite their green credentials, EVs still have two main disadvantages compared with gasoline vehicles: One is high battery costs and the other is the limited ranges they can reach on one charge. But Kandi knows how to market its main product, a small electric car that has a range of 80 km and a maximum speed of 70 km per hour. It did so by forming joint ventures with local companies in several east China cities. These joint ventures have in turn set up stations to allow

consumers to rent the EV to run short errands. They also lease the EV to local residents and offer battery swap services.

Chinese cities used to favor local state-owned automakers when distributing their share of subsidies for green vehicles. But Beijing plans to ban the practice. In September, Beijing's policy to exempt green-vehicle buyers from paying the vehicle purchase tax will take effect.

Favorable government policies are now driving more private Chinese companies to the EV market, which will further strengthen the position of private players in the domestic EV market.

### **63. China to Regulate Rates for Electric Cars, Oversight of Charging Stations**

In a move to boost consumer confidence in electric cars and encourage investment in charging stations, China said it will regulate the cost of electricity for automobiles and oversee the charging industry. Through 2020, state-owned grid companies will be required to connect vehicle charging units to the grid and to provide a set price for the electricity, determined either by local industrial rates for the big charging stations or residential rates for the community charging stations, the National Development and Reform Commission said July 31.

The industry has not been well-regulated, letting different regions charge different rates. The country's two main state grid companies also have been able to essentially set their own rates for charging stations.

The per-mile energy costs to drivers of electric cars should be about 30 percent lower than the cost to those who use fossil fuel to power an internal combustion engine vehicle, Li Caihua, deputy director of the pricing department at the National Development and Reform Commission, told the state-run China Daily newspaper July 31.

The announcement came just days after China's State Council unveiled a development plan through 2020 to encourage investment in the domestic industry for electric and alternative-energy cars, create more incentives for potential buyers and add charging facilities. And it followed a July 9 announcement that China will exempt electric, plug-in hybrid and fuel cell vehicles from a 10 percent purchase tax from September 1<sup>st</sup> until the end of 2017.

### **64. China Said to Consider \$16 Billion in Funding for Electric-Vehicle Chargers**

China is considering providing as much as 100 billion yuan (\$16 billion) in government funding to build more charging facilities and spur demand for electric vehicles, according to two people familiar with the matter. The policy will be announced soon, said the people, who asked not to be named because the discussions are private. The people declined to provide further details of the plan such as how long the program would last or whether the chargers would be compatible with cars made by Tesla Motors Inc.

Increased state funding would be a tailwind for carmakers coping with consumer concerns over the price, reliability and convenience of electric vehicles. It would also build on efforts by China, the world's biggest carbon dioxide emitter, to fight pollution and cultivate its local electric vehicle (EV) industry, which includes BYD Co. and Kandi Technologies Group Inc.

“Charging infrastructure and EV growth is a chicken-and-egg situation,” said Ashvin Chotai, managing director of researcher Intelligence Automotive Asia. “It's got to be a gradual process to



scale up both EV sales as well as charging infrastructure. EVs are still not very attractive when compared with conventional-powered cars.”

Among recent government initiatives, China will exempt new energy vehicles—defined as electric cars, plug-in hybrids and fuel-cell vehicles—from a purchase tax starting in September, and government departments have been ordered to buy such vehicles for their fleets.

Supporting a strategic and emerging industry like new-energy vehicles is a “win-win” for industrial development and environmental protection, the central government said in July in the statement announcing the waiver of the purchase tax. Developing new-energy autos is important for spurring innovation, promoting energy savings and reductions in emissions, and it will help to drive domestic demand and nurture new avenues of growth, according to the notice.

The government is also considering allowing non-carmakers to manufacture electric vehicles to foster more competition, the China Automotive Technology and Research Center, which helped draft the new initiative, said in June. That would pave the way for the likes of Wanxiang Group Corp., the Chinese auto-parts maker that owns Fisker Automotive, to build electric cars in the country.

In July, China's central government set a target for electric cars to make up at least 30 percent of government vehicle purchases by 2016. The ratio will be raised beyond 2016, when local provinces are required to meet the target.

While sales of electric vehicles in China have lagged behind government targets, BYD, the electric automaker partially owned by Warren Buffett's Berkshire Hathaway Inc., earlier in August cited favorable government policies for helping the company's new-energy vehicle sales to jump six fold during the first half of 2014.

The government has recently introduced “unprecedented” beneficial policies for EVs, spurred by concerns including energy security and pollution, BYD Chairman Wang Chuanfu said August 26<sup>th</sup>. There are also a lot of obstacles, among them charging infrastructure, he said in a briefing in Shenzhen to unveil plans for Denza, the joint electric car brand between BYD and Daimler AG, whose sales will begin in September in Beijing, Shanghai and Shenzhen.

Bayerische Motoren Werke AG, which plans to sell its electric i3 city car in China this year, has predicted that the country will become the world's largest market for electric vehicles in five years at latest, as more charging infrastructure is built and the government promotes cleaner cars, Karsten Engel, BMW's China head, said in May.

## **65. Tesla Motors, China Unicom to Build EV Charging Stations**

U.S. electric carmaker Tesla Motors said recently that it would partner with China's No. 2 mobile carrier, China Unicom, to build charging outlets across the country.

The companies have signed a deal to build charging posts at 400 China Unicom stores in 120 cities, and will also set up super-charging outlets in 20 Chinese cities, Tesla's China spokeswoman Peggy Yang said.

Tesla's billionaire co-founder Elon Musk has said he expects to invest hundreds of millions of dollars to build charging outlets in China as the company seeks to address Chinese customers' complaints about belated product delivery.

"The deal represents our biggest investment so far in charging facilities in China," Yang said in a telephone interview.

Tesla previously struck deals with Chinese property developers such as Soho China Ltd. and China Yintai Holdings Ltd to build charging outlets.

A shortage of charging facilities has long been considered a major roadblock to electric car sales in China, endangering Beijing's ambition to put 5 million green vehicles on the road by 2020.

By linking up with Unicom, which has stores nationwide, Tesla can quickly service customers in most parts of China. Tesla began delivering its Model S sedans in Beijing and Shanghai in April.

The charging service will be free and is only available for Tesla vehicles, according to the Tesla China spokeswoman.

Rival BMW will deliver its electric sedan i3 and plug-in hybrid i8 sports car next month, while Daimler will launch premium electric car Denza later this year jointly with Chinese carmaker BYD Co.

Palo Alto, California-based Tesla is barred by Chinese rules from making cars in China unless it forms a joint venture with a local automaker. Tesla, which makes cars in a factory in the San Francisco suburb of Fremont, is still interested in making cars in China independently, according to a Tesla executive who declined to be identified. But that is unlikely in the foreseeable future unless China changes its current policy, he said.

## **66. China Levies Record 1.23 Billion Yuan in Fines on 12 Japanese Suppliers**

China has found 12 Japanese suppliers guilty of price fixing and given them a record 1.24 billion Yuan (\$200 million) in fines amid one of the broadest investigations since the nation's antitrust law came into effect six years ago. Eight Japanese auto-parts makers and four bearings manufacturers were found guilty of collusive behavior, with Sumitomo Electric Industries Ltd. and Yazaki Corp. drawing the heaviest fines, according to the National Development and Reform Commission in a statement on its website.

Denso Corp., Aisan Industry Co. and NSK Ltd. were among companies found guilty as regulatory scrutiny tightens in the world's second-largest economy. The rest of the companies named in the NDRC statement are: Hitachi Automotive Systems Ltd., Mitsubishi Electric Corp., Mitsuba Corp., Furukawa Electric Co., Nachi-Fujikoshi Corp., Jtekt Corp. and NTN Corp.

Separate antitrust investigations have prosecuted numerous Japanese auto suppliers in the U.S. and Europe. Japan's NGK Spark Plug recently agreed to pay a \$52.1 million fine and plead guilty to a felony charge for its role in fixing the prices of spark plugs and other parts in the U.S.

Over the course of the multiyear U.S. investigation, 28 companies and 26 executives have pleaded guilty or agreed to plead guilty in the probe, and agreed to pay \$2.4 billion of criminal fines, the Justice Department said. It was not clear if Chinese regulators took any cues from the U.S. probe.

The investigations covered the period from January 2000 to February 2010 for the parts makers, and 2000 to June 2011 for the bearings makers.

Hitachi and Nachi-Fujikoshi were exempted from penalties as they took the initiative to report the monopoly agreement and provided evidence to the authorities, the NDRC said.

The auto components involved in the price fixing were used in more than 20 models manufactured by Toyota Motor Corp., Honda Motor Co., Nissan Motor Co., Suzuki Motor Corp. and Ford Motor Co., according to the statement.

The investigations were part of a broader probe into pricing practices in the auto industry, which has led at least seven automakers to cut prices and raised concern that foreign businesses are being picked on.

For example, China will fine Audi about 250 million Yuan (\$40 million) for violating anti-monopoly laws, the 21st Century Business Herald, an influential business daily, has reported. Citing an unidentified source that the paper described as authoritative, the fine to be imposed on the Volkswagen Group subsidiary is calculated based on a percentage of its 2013 car sales in the central province of Hubei.

Under the 6-year-old anti-monopoly law, the National Development and Reform Commission can impose fines of between 1 percent and 10 percent of a company's revenues for the previous year.

An investigation by Chinese authorities found that Audi's dealer unit, FAW-Volkswagen Sales Co., had "violated national anti-monopoly laws," the automaker said in a statement to Automotive News Europe. Audi said that it and FAW-VW "closely cooperated with the investigation and will accept a penalty."

Tensions in China's foreign business community escalated to new highs after European companies protested that local authorities involved in the antitrust crackdown are abusing their power through intimidation tactics. Chinese investigators are picking on foreign companies, pressuring them into accepting punishments and depriving them of full hearings, the European Union Chamber of Commerce said in a statement, without naming anyone.

#### **67. VW-Brand Sales Advance 11%, Top 200,000 in July**

Deliveries of VW-brand vehicles in China rose nearly 11 percent year-on-year in July to 210,000 units -- rising at about the same rate as industry sales for the month. For the first seven months, VW-brand sales in China and Hong Kong increased 18 percent to 1.6 million units.

VW has released sales figures for some of its brands. Last month, Audi sales in China increased 16 percent, while Skoda deliveries rose 17 percent.

Volkswagen has been spending heavily to expand production and maintain its sales growth. Last month, the company announced that its joint venture with China FAW Group Corp. will spend 2 billion euros (16.5 billion Yuan) to build two new assembly plants in Qingdao and Tianjin.

#### **68. China Urges Public to Walk, Ride Bikes to Help Cut Smog**

The Chinese government has identified public participation as a key element in its efforts to reverse some of the environmental damage done by more than three decades of breakneck economic growth. It has issued a "behavioral standards" guide to combat pollution and reduce

environmental damage, urging people to do everything from walking and riding bicycles to buying goods with less packaging.

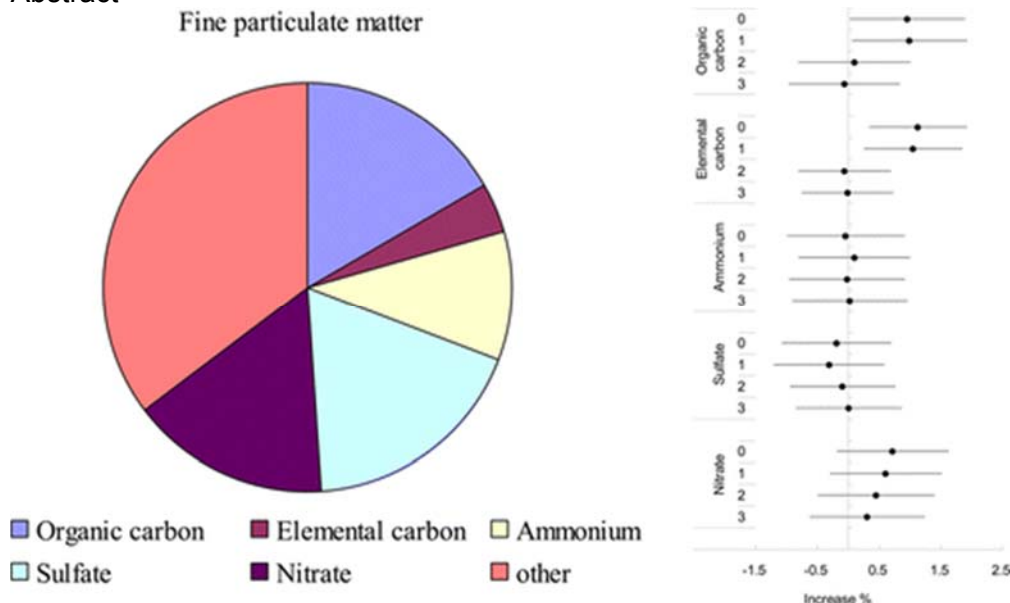
The list of eight standards, published on the environment ministry's website urged citizens to refrain from burning garbage, and limit the use of fireworks and barbecues. It also urged the public to take responsibility for pollution by reporting illegal behavior to the authorities.

Amendments to the country's Environmental Protection Law, passed on April, made it an obligation for all Chinese citizens to protect the environment.

A local government study showed in April that 31 percent of the smog in China's capital Beijing is derived from vehicles, 22.4 percent from coal burning and 18.1 percent from industry. Beijing's environmental bureau said 14.1 percent was made up of other smaller sources like food preparation, livestock rearing and vehicle repairs.

### 69. PM<sub>2.5</sub> Constituents and Hospital Emergency-Room Visits in Shanghai, China

Abstract



Although ambient PM<sub>2.5</sub> has been linked to adverse health effects, the chemical constituents that cause harm are largely unclear. Few prior studies in a developing country have reported the health impacts of PM<sub>2.5</sub> constituents. In this study,<sup>1</sup> we examined the short-term association between PM<sub>2.5</sub> constituents and emergency room visits in Shanghai, China. We measured daily concentrations of PM<sub>2.5</sub>, organic carbon (OC), elemental carbon (EC), and eight water-soluble ions between January 1, 2011 and December 31, 2012. We analyzed the data using overdispersed generalized linear Poisson models. During our study period, the mean daily

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average concentration of PM<sub>2.5</sub> in Shanghai was 55 µg/m<sup>3</sup>. Major contributors to PM<sub>2.5</sub> mass included OC, EC, sulfate, nitrate, and ammonium. For a 1-day lag, an interquartile range increment in PM<sub>2.5</sub> mass (36.47 µg/m<sup>3</sup>) corresponded to 0.57% [95% confidence interval (CI): 0.13%, 1.01%] increase of emergency room visits. In all the three models used, we found significant positive associations of emergency room visits with OC and EC. Our findings suggest that PM<sub>2.5</sub> constituents from the combustion of fossil fuel (e.g., OC and EC) may have an appreciable influence on the health impact attributable to PM<sub>2.5</sub>.

## **70. Companies in China Facing Pressure to Disclose and Cut Their Pollution**

Chinese provinces and local governments are becoming increasingly stringent in requiring companies to publicly disclose how much pollution they emit, and tracking the data. The Sichuan provincial environmental protection bureau released a real-time pollution map on August 7<sup>th</sup> that tracks airborne, wastewater and heavy metal emissions from 595 companies, as well as data from 165 wastewater treatment plants.

And more recently, the National Development and Reform Commission said government officials will be held accountable if their region or municipality misses targets for cutting energy consumption.

The environmental protection bureau in Hangzhou, capital of Zhejiang province, recently released a real-time monitoring map covering emissions from major businesses in the municipality, the state-run Xinhua news agency reported Aug. 11. Nanjing, capital of neighboring Jiangsu province, also released an automatic monitoring system regulation in May that it will implement this year.

The Institute of Public & Environmental Affairs, a nongovernmental organization in Beijing, has been releasing pollution maps from publicly disclosed pollution data from companies and state-owned enterprises. It also developed mobile applications to let citizens track pollution information on their smartphones.

Liu Xiying, assistant professor at the School of Energy Research at Xiamen University, told the press that getting basic pollution emissions data from companies has long been a “big problem.” Although data collection has improved in recent years, more action is needed to “promote and build a supervised data system,” he said. “If the government can establish relatively standard data reporting, statistical systems and open platforms [for disclosure] that are common across provinces, then they’ll be able to better find the problems by comparing data laterally,” Liu said.

The Ministry of Environmental Protection (MEP) has begun reporting more companies that are in violation of pollution emission policies to the China Securities and Regulatory Commission. On August 1<sup>st</sup>, it cited three companies—Liaoning Anshan Iron and Steel Group Co. Chemical Plant, Harbin Linen & Textile Co., and Guangxi Baise Rongda Copper Industry Co. Ltd.

The MEP is drafting a policy for publicly disclosing the names of state-owned companies that delay paying their pollutant discharge fees, and will likely release that policy later this year, according to a report on the China Environmental Chamber of Commerce website in May.

In late July, Hebei province announced that it is setting up an automatic monitoring system for iron, steel, cement, coal-fired power and glass industries that will warn companies and local environmental bureaus when emissions intensity and emissions totals are exceeded. The system is being piloted at nine companies and will be expanded in the second half of 2014. The provincial

environmental protection bureau expects the system will aid in pollution emissions monitoring and help prevent companies from submitting false data, which has been a problem in the past.

On August 13<sup>th</sup>, China's MEP encouraged citizens to call an environmental hotline to report pollution or other activities damaging the environment. (See story above)

### **71. China Provinces on Track to Meet 2015 Energy Targets: NDRC**

China has pledged to reduce its energy intensity - the amount of energy it uses to add a dollar to its gross domestic product (GDP) - to 16 percent below 2010 levels by 2015. Beijing's intention in setting the targets was to slow emissions of climate-changing greenhouse gases and cut expensive fuel imports, but they have won new relevance with the pollution crisis that has enveloped the nation the past two years.

The central government has distributed the cut targets in a 10-18 percent range across the provinces.

Data released by China's top economic planner the National Development and Reform Commission (NDRC) showed that 26 of 30 regions had achieved more than 60 percent of their targets by the end of last year. No overall number for China was given.

Yang Fuqiang, an environmental expert with U.S.-based non-government agency Natural Resources Defense Council, said China would meet its 2015 target. "But for the (following) five-year period, there is not much that can be done to improve end users' efficiency, other than clean up the entire energy mix," he said.

Amid a slowing economy and rising public anger over pollution, China has in recent years closed down thousands of old, inefficient coal plants and stamped out overcapacity in iron, steel and cement production.

The north-eastern province of Jilin had already achieved more than its 16-percent target, while Sichuan (96.5 pct.), Chongqing (94.5 pct.) and Beijing (91 pct.) were also over-achieving, according to the NDRC data. Shanghai and manufacturing hub Hebei, both with 82 percent of their targets met, were also ahead of schedule, along with Henan and Hunan. Most others had achieved 60-80 percent.

The data also confirmed concerns that some of China's pollution is being moved to the poor, western interior.

Energy intensity in the troubled Xinjiang province worsened by 200 percent over the period, a trend NDRC attributed to a boom in new energy-intensive projects. Qinghai and Ningxia, also western provinces, were trailing far behind their targets as local economic development relies heavily on coal.

### **72. Pollution, Smoking, Roads, Obesity Kill 4.7m Chinese A Year**

Air pollution, smoking, obesity and accidents, especially on the road, kill at least 4.7 million Chinese a year and cost the country tens of billions of dollars, according to researchers. In an overview published in *The Lancet*, they said China had in some respects made great strides in

health, boosting the average lifespan from 40 years in 1950 to 76 years in 2011 and rolling back many infectious diseases.<sup>2</sup>

On the other hand, the risk of premature death and sickness from pollution, smoking, road crashes and "lifestyle" ailments is worse than before.

The trio of Chinese and US experts said China had the chance of learning from rich countries which had already been down this path, a by-product of rising prosperity. "Many of these risks can be lowered by interventions with shown effectiveness," they said. "China has the opportunity to avoid repetition of the full toll of preventable disease burdens suffered by high-income countries from non-communicable diseases."

The research, led by Jeffrey Koplan, a professor at Emory University in Atlanta, provides the following snapshot, which includes figures that have been published previously:

- Air pollution: A million deaths annually are attributable to inhaling indoor smoke from solid fuels, and another 1.2 million from inhaling fine particulate matter outdoors.
- The economic cost from particulate air pollution among urban dwellers was 341 billion yuan (\$55 billion, 42 billion euros) in 2006, according to the paper.
- Smoking: 1.4 million premature deaths each year, costing 41 billion yuan annually on the basis of values for 2000.
- Road fatalities: China has more than 800,000 deaths annually from accidents, which are "mainly" accounted for by road accidents, according to the report. (Separately, the United Nations estimated 275,000 road deaths in China in 2010).
- Accidents of all kinds are the leading cause of death in the 1-39 age group and cost 65 billion yuan in medical expenses alone, said the study.
- Obesity: 363,000 fatalities each year attributable to high body-mass index, a condition linked to heart disease, diabetes and other ailments. The cost -- in 2003 -- was 21 billion yuan.

### **73. Chinese Regulators Back Draft Amendments to Strengthen Air Pollution Law**

Environmental officials in China have approved draft amendments that would strengthen the country's main air pollution control law, a top researcher told the China Energy Saving and Environmental Protection Forum in Shenzhen on August 26<sup>th</sup>.

After review by experts from more than 200 institutions, draft amendments to the Air Pollution Prevention and Control Law were submitted to the Legislative Affairs Office of the State Council in June, said Chai Fahe, vice dean of the Chinese Research Academy of Environmental Sciences in Beijing.

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<sup>2</sup> The Lancet, [Volume 384, Issue 9945](#), Pages 783 - 792, 30 August 2014 doi:10.1016/S0140-6736(14)61214-9, "**Can China diminish its burden of non-communicable diseases and injuries by promoting health in its policies, practices, and incentives?**", [Cheng Huang](#) PhD, Prof [Hai Yu](#) MD, Prof [Jeffrey P Koplan](#) MD

The amendments could add consistency and a new level of commitment to the country's announced fight against air pollution. But it is unclear if or when the amendments could be enacted into law.

The Air Pollution Prevention and Control Law was last amended in 2000 and updated drafts have gone through several rounds of revisions since 2006, when Chai helped with the initial outline, he said. Draft amendments also were submitted in 2010, only to be bounced back for further revision without going before the Standing Committee of the National People's Congress for final review.

In the meantime, China has experienced a wave of public concern over rising air pollution levels and a counter-reaction by central government authorities who upgraded air quality standards, increased monitoring and pushed through a sweeping action plan in September 2013.

But amending the Air Pollution Prevention and Control Law would go beyond the action plan to strengthen the legal basis for air pollution control nationwide, and could lead to broader enforcement.

The action plan focuses primarily on controlling air pollution in three key urban areas with large and increasingly affluent populations: the northeast area around Beijing-Tianjin municipalities and Hebei province, the Yangtze River Delta around Shanghai, and the Pearl River Delta in southern Guangdong province.

Chai said the amendments would control small particulate matter pollution, or PM<sub>2.5</sub>, and center on increasing government responsibility, encouraging public disclosure and participation, and strengthening how companies control their airborne emissions. Other areas covered in the draft amendments include tougher penalties for polluters, tightened control of air pollution from coal-fired power units, strengthened standards for vehicle emissions and fuel efficiency, categorized dust pollution sources and methods of control, improved prevention and control of volatile organic compound pollution, and early warning systems for air pollution emergencies, Chai said.

#### **74. Climate Change to Cut South Asia's Growth 9 Percent by 2100: ADB**

Climate change will cut South Asia's growth almost 9 percent by the end of the century unless world governments try harder to counter global warming, according to the Asian Development Bank (ADB). The region is home to a fifth of the world's population and is already vulnerable to climate extremes: seasonal floods, cyclones and droughts that ravage vast swathes of agricultural land and displace hundreds of thousands of people every year.

The costs of countering climate change in South Asia will also increase over time and will be prohibitively high in the long term, the ADB's "Assessing the Costs of Climate Change and Adaptation in South Asia" report said.

Gross domestic product (GDP) losses are projected at 12.6 percent for the Maldives, 9.9 percent for Nepal, 9.4 percent for Bangladesh and 8.7 percent for India by 2100.

"Without global deviation from a fossil-fuel-intensive path, South Asia could lose an equivalent of 1.8 percent of annual GDP by 2050, which will progressively increase to 8.8 percent by 2100 on the average under the business-as-usual scenario," it said.

The Maldives will also be hardest hit in the next few decades, with a loss of 2.3 percent of GDP. Bangladesh, Bhutan, India, Nepal and Sri Lanka will lose 2 percent, 1.4 percent, 1.8 percent, 2.2



percent, and 1.2 percent, respectively, by 2050. Those countries, excluding Sri Lanka, will see more frequent severe weather, damaging property, infrastructure, agriculture and human health, the ADB said. Between 1990 and 2008, more than 750 million people in South Asia were affected by at least one natural disaster, resulting in almost 230,000 deaths, it said.

Coastal areas of Bangladesh, India, the Maldives, and Sri Lanka will see sea level rises that are likely to displace people and adversely affect the tourism and fisheries sectors.

The cost of shielding the region against climate change could be lowered if the world's governments significantly cut greenhouse gas emissions and, if the rise in global temperatures was kept below 2.5 degrees Celsius, that cost could be nearly halved to about \$40.6 billion, or 0.48 percent of GDP, it said.

South Asia also needs to introduce flood- and saline-resistant crop varieties, better coastal zone management, improved disease surveillance, protection of groundwater and greater use of recycled water.

India, one of the world's largest agrarian economies, is badly at risk, the report said, and may see GDP losses of up to 8.7 percent by 2100. "Agriculture provides employment and livelihood opportunities to most of India's rural population and changes in temperature and rainfall, and an increase in floods and droughts linked to climate change, would have a devastating impact on people's food security, incomes, and lives," ADB Vice-President Bindu Lohani said in a statement.

#### **75. Pollution Fight Needs To Cover Whole Of NCR**

The Delhi environment department is coordinating with various agencies to implement the recommendations by the lieutenant governor's high-powered committee for controlling air and water pollution. But officials feel the plan may have little effect unless such measures are taken in the entire national capital region.

The measures, which include raising parking charges as well as regulating entry and exit of vehicles not bound for Delhi, should be in place within another week. "But air pollution is a cross-border issue. The measures may not be very successful if the neighboring states don't act alongside. We are coordinating with National Capital Region Planning Board for taking steps to check air pollution," said a senior official at the department.

The current policy is meant only for Delhi. The department is now pushing for similar policies in Uttar Pradesh, Haryana and Rajasthan.

To begin with, the Delhi government is asking for installation of air pollution monitoring stations in all the satellite towns, especially Gurgaon, Noida, Ghaziabad and Faridabad. Due to the abysmal infrastructure and manual monitoring, only PM10 (coarse particles) can be measured. Assessing PM2.5 (fine, respirable particles) levels is essential as these pollutants can have more serious health impacts like decreased lung function and cardiovascular issues.

"We have six monitoring stations of Delhi Pollution Control Committee and five stations of Central Pollution Control Board (CPCB). The same level of real-time monitoring is needed in all of NCR to deal with air pollution in Delhi. The ministry of earth sciences is working on getting land and establishing these stations on priority," added the official.

Gurgaon and Ghaziabad were not included in WHO's urban air quality database, which found the highest PM2.5 levels in Delhi out of 1,600 cities across the world. Air and water pollution in NCR could become a more serious concern with the environment ministry revisiting a moratorium on 43 critically polluted areas in the country, including Ghaziabad, which was listed as the third most polluted industrial area in 2009. MoEF recently asked CPCB to reassess the comprehensive environmental pollution index (CEPI) and its rankings.

A study of satellite-based aerosol optical depth data by scientists at the division of environmental health in the public health sciences department at University of Miami and NASA has found that Gurgaon, Noida and Faridabad borders saw a significant deterioration in air quality after 2002 and recommended uniform interventions in the region.

## **76. Pump Prices Of Diesel Inch Closer To Market Rates in India**

Revenue losses to the government on sale of subsidized diesel are expected to shrink to a record low of around 10 paise per liter by August end, paving the way for the deregulation of the fuel as early as next month unless political considerations ahead of assembly elections in four states play spoilsport.

Pump prices of diesel would be almost on a par with market rates after the monthly price increase of 50 paise, which is scheduled soon. The UPA Cabinet in January last year allowed state-run retailers to raise diesel rates in small doses of 50 paise every month until pump prices were aligned with international ones. Since then, prices have risen 24%. Diesel is currently sold at Rs 58.40 per liter in Delhi.

The decision on diesel price deregulation will be taken by the Cabinet later next month, officials said. "The timing for deregulation will be decided by the finance minister after considering the politico-economic situation," a source said.

Finance Minister Arun Jaitley told Parliament last month that the government was keen on fuel price reforms. "If there are no international shocks in the oil sector, it is expected that in a year the government will be able to decontrol diesel fully," he had said.

Officials said deregulation of diesel could be promoted as one of the major achievements of the Modi regime and might get a prominent place in its 100-day report card, which is expected next month. The diesel subsidy was a major drag on the exchequer, having accounted for about 45-50% of the total fuel subsidies until January last year. The UPA government's move to make a monthly increase narrowed the diesel subsidy to an estimated Rs 19,584 crore in the current financial year from Rs 62,837 crore in 2013-14.

The expected move to free diesel prices from government control will also boost private investment in the fuel retail sector that was opened up in 2002. At the time, companies such as Reliance Industries and Essar Oil captured more than 17% of the market in two-three years. But they had to close their pumps because of competition from state-run oil companies after the government regulated petrol and diesel rates for political reasons.

The government asked state-run Indian Oil, Bharat Petroleum Corp and Hindustan Petroleum Corp to sell fuels below market rates and then compensated them for doing so. The UPA government deregulated petrol prices in June 2010. It had also decided to free diesel rates in principle but could not muster the courage to implement the Cabinet decision fearing reprisals from coalition partners.

## **77. Introduction of ULSD Planned For Sri Lanka**

A requirement has been felt to introduce an Ultra Low Sulfur Diesel product to the market to cater to the requirements of the modern diesel vehicle fleet in Sri Lanka. Ceylon Petroleum Corporation (CPC) is the market leader of the petroleum industry and it has been serving the people of Sri Lanka for more than 50 years.

CPC is going to introduce low sulfur Super Diesel to Sri Lankan Petroleum Market to the beneficiary of modern vehicle diesel fleet. Accordingly, specifications for the parameters therein were prepared comparing the world standards being currently used, such as the Worldwide Fuel Charter, Euro Standards for fuels and specifications adopted elsewhere in the world, parameters of specifications were adjusted to suit the requirements of the country. This new product gives several benefits, principle of which are as follows:

- Its higher Cetane Number helps to improve the performance of the engine and fuel efficiency.
- Protects the components in the advanced emission systems.
- Abrasive particle contamination which is as low as 10 mg per Kg considered to be superior by any
- World standard.
- Enhances the life span of the engines.
- Environmental friendly as it reduces the emission of Toxic Fumes such as sulfur, oxides of nitrogen and black smoke.

CPC is compelled to improve the quality of Diesel, since it contributes a lot towards the reduction of harmful diesel exhaust emissions causing environmental pollution and serious health hazards which have been reported to have costly effects both economically and socially on the society at large. Accordingly, we are pleased to inform you that a launching ceremony of has been scheduled to be held on 22nd August 2014.

The price of is same as Lanka Super Diesel (A0016L99).

## **78. Pertamina to Increase Diesel Supply to PLN; Price Still In Dispute**

State-owned oil and gas firm PT Pertamina has agreed to increase the supply of diesel fuel to state-owned electricity firm PT PLN allowing the latter to restart operations at diesel-fired power plants that had been suspended due to lack of supply. The deal was reached after a closed-door meeting between the two firms and officials of the Finance Ministry as well as the Energy and Mineral Resources Ministry. Under the agreement, Pertamina agreed to supply diesel according to a quota set by the government.

“What is important is that there is no problem anymore [between Pertamina and PLN]. Everything has been agreed,” said Pertamina’s director of marketing and trade Hanung Budya Yuktyanta after the meeting. Hanung, however, declined to reveal the details of the agreed points between Pertamina and PLN.

On August 10<sup>th</sup>, Pertamina unilaterally decided to slash 50 percent of its diesel supply to PLN. The oil company said it had suffered losses of about US\$45 million from the diesel sales to PLN because it claimed the latter bought its diesel well below the market price. Hanung said that the

losses would double to around \$90 million if the price paid by PLN remained the same throughout this year.

The reduction in the supply of diesel to PLN sparked concerns that PLN would not be able to adequately supply electricity to its customers across the country. Operations at a number of the company's diesel-fired power plants were suspended due to the lack of fuel supply.

Hanung said that with the agreement, Pertamina could ensure that widespread blackouts due to a power deficit would not happen. However, the dispute on the diesel fuel price between Pertamina and PLN remained unclear despite the agreement.

PLN president director Nur Pamudji said on Monday that PLN had agreed to buy diesel from Pertamina at the Mean of Platts Singapore (MOPS) rate plus 9.5 percent from July until the end of this year as requested by Pertamina. He said, however, that Pertamina demanded PLN also pay the same price for diesel it had bought from Pertamina since January last year. "On average, we bought diesel from Pertamina at the MOPS rate plus 7.8 percent from January last year to June this year," he said.

The Finance Ministry's state budget policy center head Askolani said that while the diesel supply issue had been resolved, the price for Pertamina's diesel should be determined only after the Development Finance Comptroller (BPKP) finished auditing Pertamina's financial report to check whether the losses claimed by the oil and gas firm were accurate.

### **79. Report Says Tibet's Glaciers at Their Warmest In 2,000 Years**

The Tibetan plateau, whose glaciers supply water to hundreds of millions of people in Asia, were warmer over the past 50 years than at any stage in the past two millennia, a Chinese newspaper said, citing an academic report. Temperatures and humidity are likely to continue to rise throughout this century, causing glaciers to retreat and desertification to spread, according to the report published by the Chinese Academy of Sciences' Institute of Tibetan Plateau Research.

"Over the past 50 years, the rate of temperature rise has been double the average global level," it said, according to the report on the website of Science and Technology Daily, a state-run newspaper.

Glacier retreat could disrupt water supply to several of Asia's main rivers that originate from the plateau, including China's Yellow and Yangtze, India's Brahmaputra, and the Mekong and Salween in Southeast Asia.

In May, Chinese scientists said Tibetan glaciers had shrunk 15 percent - around 8,000 square km (3,100 square miles) - over the past 30 years.

The new report said a combination of climate change and human activity on the plateau was likely to cause an increase in floods and landslides there. However, rising temperatures had also improved the local ecosystem, it said.

The scientists urged the government to work to reduce human impact on the region's fragile environment.

But Beijing is building a series of large hydropower projects there, with construction of several mega-dams expected to start by 2020. China has built thousands of dams in the past few decades in a bid to reduce its reliance on imported fossil fuels.

India, too, is planning a number of hydro plants along the Brahmaputra River - more than 100 proposals are under consideration - as the country strives to boost electricity generation.

## SOUTH AMERICA

### 80. Santiago's Air Pollution Plan Could Include Electric Buses, Cleaner Diesels

Chile is considering a wide range of measures to improve air quality in the polluted capital Santiago, including stricter diesels standards, electric vehicles for public transport and a ban on the use of firewood in the city, according to the Ministry of the Environment. The ministry said it studied ways to reduce levels of breathable particulate matter (PM-2.5) in Santiago in advance of a reduction plan that is being developed.

Environment Minister Pablo Badenier said on July 24<sup>th</sup> that the government will designate Santiago a saturated zone for PM-2.5 emissions in August, when work will begin on a draft version of the new plan. The move forms part of the government's four-year strategy to clean up 14 cities throughout central and southern Chile.

Santiago has already been declared a saturated zone for PM-10 (particles 10 micrometers in diameter or smaller), requiring authorities to take measures such as restricting vehicle use, prohibiting the burning of firewood and limiting outdoor sports activities when pollution reaches harmful levels.

The proposals include:

- Implementing a **regional clean-diesel program** to cut emissions from goods vehicles, machinery used in construction and school buses. The law already requires diesel sold in the capital to contain less than 15 parts per million of sulfur.
- Converting the public transport vehicle fleet to one that runs on **electricity**.
- Promoting **more efficient cars** through taxation.
- Cutting emissions of particulate material and nitrous oxides from industry through emissions targets for major polluters, emissions standards for industrial processes, industrial boilers and thermoelectric plants, the installation of low-NOx burners in gas-fired boilers and new criteria for suspending industrial activity.
- Imposing stricter rules on the use of firewood, including a ban on firewood heaters in Santiago and the replacement of inefficient heaters in rural areas.
- Controlling emissions of volatile organic compounds (VOCs), including rules on the use of domestic solvents, a ban on paint containing more than 12 percent solvent, the use of low-solvent products and more efficient application systems in vehicle painting, the application of abatement technologies in retrogravure and flexographic printing and **the installation of vapor recovery systems in all services stations** and solvent capture systems in dry cleaning businesses.
- Implementing a program to control farm emissions, covering the treatment and application of manure and the management of animal diets in large rearing facilities.

The study estimates that within five years these measures could cut in half direct emissions of PM-2.5, reduce NOx emissions by 12 percent and VOC emissions by 30 percent.

The measures would cost around \$158 million to implement between 2015 and 2020, a figure equal to 28 percent of the annual impact of these emissions on the health of people living in the region, the study said.

Poor air quality is estimated to cause at least 4,000 premature death a year in Chile, the ministry said.

## AFRICA

### **81. Energy Regulatory Commission Cuts Diesel, Kerosene Prices at the Pump**

Kenya's energy regulator cut retail prices of diesel and kerosene recently, and increased petrol pump prices, reflecting changes in their import costs. Fuel prices have a big effect on inflation in the east African nation, which relies heavily on diesel for transport, power generation and agriculture, while kerosene is used in many households for cooking and lighting. The government started a monthly review of retail fuel prices in 2010 after they shot upwards, driving up the cost of living. The Energy Regulatory Commission cut the maximum retail price on a liter of diesel by 1.69 shillings to 102.98 shillings (\$1.17) in the capital Nairobi and that of kerosene by 1.07 shillings per liter to 83.05 shillings. It raised the price of petrol by 0.76 shillings per liter to 116.62 shillings. The commission said the cost of importing a tonne of diesel declined 2.06 percent in July. The cost of kerosene imports also fell 1.92 percent per tonne while the cost of importing petrol rose by 1.67 percent.

### **82. Tanzania to Start Using Lower Sulfur Fuels Next Year**

AS the world moves to curb environmental pollution, diesel imports with sulfur above 50 parts per million will not be allowed into the domestic market come next January. Tanzania is already leading other East African economies in restricting fuel with more than 500PPM of sulfur as its peers allow petroleum products of up to 5,000PPM.

"The current restriction which allows importation of diesel with sulfur content of 500PPM will phase out by December 31 this year," said Gerald Maganga, Energy and Water Utilities Regulatory Authority (Ewura) Technical Manager.

Briefing stakeholders in Dar es Salaam on progress being made in phasing out sulfur enriched petroleum products mainly diesel and petrol, Engineer Maganga said the country which has no refinery of its own, has made significant progress towards the goal.

Eng. Maganga said sulfur enriched diesel and fuel has negative effects to human health, the environment and vehicles themselves. "But using fuel with sulfur has also negative impacts on the economy," he pointed out.

United Nations Environment Programme (UNEP)'s Partnership for Clean Fuel and Vehicles has since 2012 supported developing countries improve fuel and vehicle technologies that reduce air pollution.

Sulfur enriched fuel is less efficient hence vehicles use more of it to cover a certain distance compared to sulfur free fuel. According to Tanzania Bureau of Standards (TBS), only petrol with sulfur levels not exceeding 15PPM and diesel of not more than 500PPM is allowed into the domestic market.

Operations Manager with Morogoro based ATN Petroleum, Paul Lunyalula wondered whether it is practical to impose further restrictions on fuel imports with a bigger sulfur content. "We import most of our fuel from Saudi Arabia and United Arab Emirates most of these have refineries which produce fuel with higher sulfur content," said Lunyalula.

Expressing fears that the country may find itself short of suppliers of sulfur free fuel, Lunyalula argued that even in East African Community and Southern Africa Development Community, countries are still using sulfur enriched fuels.

But Gapco Tanzania Limited senior official who also sits on TBS Technical Committee, Alope Dandapat dismissed the fears and said most developed countries are using sulfur free fuel which is readily available on the global market. "There is no scarcity of sulfur free fuel on the global market because most of the developed countries are already using it," Mr. Dandapat argued while stressing that the future belongs to efficient less polluting fuels.

Tanzania is the first country in EAC region to impose restrictions of fuel imports with huge content of sulfur since July 2012.

## MIDDLE EAST

### 83. Air Pollution Fears at Holy Sites

Pilgrims visiting the holy sites of Saudi Arabia, including Mecca, are being exposed to significant air pollution, with high levels of combustion tracer carbon monoxide (CO) and volatile organic compounds (VOCs) detected in samples, a new study shows.

Several one-minute air samples were taken from Mecca and the central pilgrimage route, which extends to Mina, Arafat, and Muzdalifah, during the main Hajj season – the largest annual Muslim gathering in the world. Those samples revealed elevated CO levels of 57 parts per million by volume (ppmv) - exceeding the maximum average concentration deemed acceptable by the US Environmental Protection Agency (US EPA).

The study, a collaboration by a team from University of California at Irvine (UC Irvine) and King Abdulaziz University, started during the pilgrimage season in 2012 with a survey focusing on measuring carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), CO, and 96 speciated C<sub>1</sub>-C<sub>10</sub> VOCs. It revealed that the major VOC sources came from vehicular exhaust and petrol evaporation.

Pilgrims spend a significant amount of time in major road tunnels, such as Souq al-Sagheer Azizia tunnels, during Hajj and the month of Ramadan, with traffic jams lasting up to an hour. The Souq al-Sagheer tunnel is particularly congested as it leads to the Grand Mosque.

Air samples from the tunnels turned out to be the most polluted, according to the survey. The Souq al-Sagheer tunnel had more than 1200 parts per billion by volume (ppbv) of gasoline evaporation tracer i-pentane. And the highest CO level (57,400 ppbv) ever recorded by the research group was measured in that tunnel. Likewise, a high benzene level of 185 ppbv was also recorded, exceeding the one-hour air quality standard of 9 ppbv.

Future studies are expected to expand the scope of sampling. "[Besides] measurements throughout the Mecca area, we hope to include more detailed surveys of tunnels in order to get a better idea of what pilgrims are breathing in these more highly concentrated areas," says

researcher Isobel Simpson from University of California at Irvine (UC Irvine). “Continued surveys would also help us understand how the air quality in Mecca is changing with time.”

Meanwhile, the Saudi Arabian government is already acting on the problem, according to a report in the Saudi-based Arab News. The Civil Defense spokesman, Saleh Al-Olyani, told the newspaper that they are working on improving ventilation and controlling carbon emissions from vehicle exhaust within tunnels.

“We would like to coordinate with groups that measure complementary air pollutants, such as nitrogen oxides, in order to get a more complete assessment of Mecca's air pollution. This in turn would allow us to better understand the formation of other harmful pollutants such as ground-level ozone,” adds Simpson.

Tahir Husain, a researcher from Memorial University of Newfoundland, who was not involved in the study, says that the research is a good start, but the researchers should have collected data on fine particulate matters as well. “Fine particulates, especially less than 2.5 microns, are very harmful to health and have a direct link to many respiratory and heart related issues.”

#### **84. Iran's Oil Minister Says The Country Has Become Self-Sufficient In Diesel Fuel.**

“At present, we are self-sufficient in the production of diesel fuel and we have no need to import it,” Bijan Namdar Zanganeh said.

Referring to the development of Iran’s giant South Pars gas field in the Persian Gulf, Zanganeh described the project as an unprecedented and the largest project in the country’s natural gas industry. He expressed hope that Iran will add 100 million cubic meters of natural gas to its national network by the end of the current Persian calendar year (ending March 20, 2015).

Iran has been trying to enhance its gas production by attracting foreign and domestic investment, especially in its South Pars gas field. South Pars is part of a larger field that is shared with Qatar. The larger field covers an area of 9,700 square kilometers, 3,700 square kilometers of which lie in Iran’s territorial waters (South Pars) in the Persian Gulf. The remaining 6,000 square kilometers, referred to as the North Dome, are located in Qatar’s territorial waters.

The Iranian oil and gas field contains 14 trillion cubic meters of natural gas, about eight percent of the world’s reserves.

#### **85. Israeli Institute to Focus on Alternative Fuels**

Tel Aviv University will open a research institute to study alternative fuels, the school announced. The National Research Institute for Transportation Innovation, with support from the Alternative Fuels Initiative in the Israeli prime minister's office, will provide facilities and financial support for researchers from Israel and abroad, and function as an incubator for startup innovators in fields related to transportation and alternative fuels, the university said in a statement August 13<sup>th</sup>. Negotiations have begun with the Massachusetts Institute of Technology and China's Tsinghua University on collaborative projects, the statement added. “The global need to reduce greenhouse gas emissions and air pollution in urban centers has created worldwide interest in finding innovative solutions that enable transportation without relying on oil,” said Eyal Rosner, director of the Alternative Fuels Initiative. Tel Aviv University is slated to receive 13.5 million shekels (\$3.9 million) in funding from the Alternative Fuels Initiative's 1.5 billion shekel (\$430 million) budget during the next five years.



## GENERAL

### **86. World Bank Review Shows Flaws in Social, Environment Safeguards Process**

The World Bank has systemic defects in its procedures to ensure that people and the environment are not harmed in development projects, according to an internal review. The global development lender is undergoing the first major update to its social and environmental protections in decades, which are likely to influence other international institutions.

Non-profit groups fear the bank may weaken its protections to speed up lending approval and better compete with development rivals, although it has said it aims to keep the safeguards as strong as ever in its efforts to combat poverty worldwide. But even the current management of safeguard risks has problems, according to the review, conducted by the bank's internal audit department.

Employees who focus on reducing social and environmental damage from projects lack independence or incentives to do a good job, and the World Bank has little oversight over how well their advice is followed and how much money is devoted to safeguards. The most experienced specialists are not necessarily assigned to the riskiest projects, according to the review.

One employee wrote that safeguards are treated as a "check the box" measure rather than an integral part of designing projects. The person's comments jibed with 77 percent of surveyed World Bank specialists, who believed the bank's management did not value their safeguards work.

The audit, dated June 16, relied on a survey of 138 World Bank employees and interviews with key staff, as well as an analysis of the bank's projects and procedures.

World Bank rules stipulate that every new project must comply with social and environmental safeguards, after facing criticism for displacing people and harming the environment with massive projects in the 1980s and 1990s. But the safeguards have not changed in more than a decade, and the bank in October 2012 launched a process to update them according to new global standards.

World Bank spokesman Frederick Jones said the bank's management requested its internal auditor to review current practices as part of the update to its policies.

"We are assessing our staff skills, accreditation, and management of staff working on environment and social safeguards," he said. "We are also improving our data collection and better calibrating our support to different levels of risk." He declined to comment further on the leaked report.

The bank's board is due to hold a technical briefing on the updated safeguards soon.

World Bank President Jim Yong Kim just finished a major reorganization of the institution to make it more efficient and attuned to countries' needs.

Long criticized for a slow bureaucratic process for approving lending, the World Bank has more recently had to contend with greater competition for development funds. Many middle-income countries, for example, can rely more on private funding and bilateral loans as they grow.

The BRICS emerging market nations are launching their own development bank and China is pushing a \$50-billion Asian Infrastructure Investment Bank, which is unlikely to have the World Bank's strict loan conditions.

### **87. World Cities, Home to Most People, To Add 2.5 Billion More By 2050: U.N.**

More than half of the world's seven billion people live in urban areas, with the top "mega cities" - with more than 10 million inhabitants - being Tokyo, Delhi, Shanghai, Mexico City and Sao Paulo, according to a new United Nations report. That proportion is expected to jump, so that more than six billion people will be city dwellers by 2045, the U.N.'s World Urbanization Prospects report said.

The jump will be driven by a "preference of people to move from rural to urban areas, and the overall positive growth rate of the world's population, which is projected to continue over the next 35 years," John Wilmoth, director of the Population Division in the UN's Department of Economic and Social Affairs said at a news conference at the UN.

Indeed, urbanization, combined with overall population growth, will boost the number of people in cities by 2.5 billion over the next three decades, with much of that growth in developing countries, especially in Asia and Africa.

India, China and Nigeria will make up 37 percent of the projected growth in the next three decades, with India adding 404 million city residents, China 292 million, and Nigeria 212 million, by 2050.

The key challenge for these countries will be to provide basic services like education, health care, housing, infrastructure, transportation, energy and employment for their growing urban populations.

"Managing urban areas has become one of the most important development challenges of the 21st century," Wilmoth said. He said providing such services for a dense urban population was typically cheaper and less environmentally damaging than doing the same for a dispersed, rural population. "The thing to be afraid of is situations in which governments do not plan for the growth that is going to take place," Wilmoth said. "Then you can get sprawls, and slums and cities that are not pleasant places to live."

The world's urban population has grown so rapidly that while in 1990, there were only ten mega cities, today there are nearly three times as many - 28 worldwide.

Sixteen of those are in Asia, four in Latin America, three each in Africa and Europe, and two in Northern America.

Tokyo is the world's most populous city with 38 million inhabitants, followed by Delhi with 25 million, Shanghai with 23 million and Mexico City, Mumbai and Sao Paulo, each with around 21 million people. The New York-Newark urban area, the world's third-largest in 1990, fell to ninth place and is expected to drop further to 14th position by 2030 as cities in developing countries become more prominent, the report said.

Low fertility, economic contraction and natural disasters were the most common factors that contributed to population losses in some Asian and European cities in recent years. Emigration was also a factor.

Meanwhile, the world's rural population, which is now close to 3.4 billion, is expected to reach its peak by 2020, after which it will decline to 3.1 billion by 2050. While Africa and Asia are urbanizing rapidly, they are still home to nearly 90 percent of the world's rural population.

### **88. U.N. Climate Talks More Advanced Second Time Around, Says Former Head**

U.N. climate negotiations have made greater progress towards agreeing a 2015 deal to bind all nations to cut greenhouse gas emissions than the lead-up to the previous attempt in 2009, former U.N. climate Chief Yvo de Boer told reporters. Envoys from almost 200 nations are aiming to agree this year on the main elements of a text to be signed by their leaders in Paris in late 2015 to tackle the emissions from 2020 that U.N.-backed scientists say are causing more severe droughts, flooding and a rise in sea levels.

"The process is definitely further advanced a year before Paris than it was a year before Copenhagen (in 2009)," de Boer said in an interview in London.

The Dutch diplomat was the public face of the negotiations from 2006 but stepped down shortly after the Copenhagen talks almost broke down despite the attendance of more than 130 world leaders late into the final night.

The U.N. has published several documents on its website meant to help guide negotiators towards agreed wording for the Paris deal, including on what countries need to include in their individual contributions and how richer nations will make good on a commitment to mobilize \$100 billion a year to help poorer states. "There is now greater clarity on the way forward on many of the substantive areas," one document said.

For de Boer, who has led the Global Green Growth Institute advising developing countries since March, December's summit in Lima, Peru, will indicate whether the world will be able to come together on the issue.

"For me, Peru will be the litmus test. Having a clear negotiating text on the table ... will give everyone a much clearer understanding of what the definition of success or failure is.

"One of the major handicaps of Copenhagen was that so many people had so many different definitions of success," he said, adding that in the lead-up to the conference it was clear that a fully-fledged treaty would not be struck.

"Small island states and the European Union were negotiating towards an international legally binding treaty that would contain obligations for pretty much everyone... whereas others, notably the United States and China, were just looking for a political agreement."

Ahead of Paris, nations have agreed that all countries should contribute, but it remains unclear what legal weight any pact will carry, or which should make the strictest contributions.

De Boer said a meaningful Paris deal would require every country to convert their contributions into national law, both to ensure they are met and to help companies raise investment in cleaner technologies. Rather than the aim of some in Copenhagen to lock in adequate targets from the outset, countries will need to review their initial contributions, including cash from richer nations, every three years or so. This would ensure they are in line with their previously agreed goal of limiting global temperature rises to 2 degrees Celsius (3.6 Fahrenheit) above pre-industrial levels.

"I do not expect Paris in one fell swoop to take us to 2C. More steps will be needed," he said.

The U.N. negotiations resume for a week in October in Bonn, Germany before the two-week Lima session in December.

### **89. Rising Temperatures, Ozone Spell Trouble for Key Food Crops**

Global warming and smoggy air will likely make it more difficult to feed a growing population, according to a new study led by researchers from the Massachusetts Institute of Technology. The interactions between a warming world and ground-level ozone threaten supplies of rice, wheat, corn and soy, the study found.

Climate change by itself may reduce crop yields by 10 percent by 2050, while the impacts from ozone are more complex and will vary by region.

Agriculture in general is "very sensitive to ozone pollution," said Colette Heald, an associate professor of civil and environmental engineering at MIT and an author of the study. The findings "show how important it is to think about the agricultural implications of air-quality regulations," she said.

The results of the study, which also involved a Colorado State University researcher, are being published this week in the journal *Nature Climate Change*.

While other studies have analyzed potential damage to food crops by climate change, little research has examined how the interplay between climate change and other air pollutants will affect plants.

"Climate change adaptation and ozone regulation have been identified as important strategies to safeguard food production," the study says, "but little is known about how climate and ozone pollution interact to affect agriculture, nor the relative effectiveness of these two strategies for different crops and regions."

Ozone is a component of smog. It forms through reactions of volatile organic compounds and nitrogen oxides in the presence of sunlight, and its production rises with temperatures. Ozone's visible effects on plants include spotting and discoloration; high amounts could reduce crop yields. According to the MIT study, 46 percent of the damage to soybean crops and 24 percent of the damage to wheat that had been credited to higher temperatures is actually due to ozone.

Of the four crops examined in the study, wheat is the most sensitive to ozone, while corn is more sensitive to heat.

The study warns that the interplay between climate change and ozone could stand in the way of meeting an expected 50 percent increase in global food demand between 2010 and 2050 because of expanding populations.

The interactions between ozone and climate change mean that the adoption of heat-tolerant varieties of crops may be less effective in areas of the world with high ozone pollution, for example.

Under the study's most pessimistic climate change and air pollution scenario, global malnourishment rates could increase from 18 percent to 27 percent by 2050. Under other scenarios, the increase in malnourishment would be about half that jump.

### **90. Study Links Stroke and Lung Cancer to PM2.5**

The cardiovascular and stroke mortality rates in Arkansas are among the highest in the USA. The annual trends of stroke and cardiovascular mortality are barely correlated to smoking cessation; while the prevalence of risk factors such as obesity; cholesterol and hypertension increased over the 1979-2007 period. The study determined the effect of chronic exposure to PM2.5 on non-accidental; cardiovascular; stroke and lung cancer mortality in Arkansas over the 2000-2010 period using the World Health Organization's log-linear health impact model.<sup>3</sup> County chronic exposures to PM2.5 were computed by averaging spatially-resolved gridded concentrations using PM2.5 observations. A spatial uniformity was observed for PM2.5 mass levels indicating that chronic exposures were comparable throughout the state. The reduction of PM2.5 mass levels by 3.0 µg/m<sup>3</sup> between 2000 and 2010 explained a significant fraction of the declining mortality. The effect was more pronounced in southern and eastern rural Arkansas as compared to the rest of the state. This study provides evidence that the implementation of air pollution regulations has measurable effects on mortality even in regions with high prevalence of major risk factors such as obesity and smoking. These outcomes are noteworthy as efforts to modify the major risk factors require longer realization times.

### **91. Brazil and India Sign Environmental Accords at Meeting of Largest Emerging Economies**

Brazil and India signed a series of environmental cooperation agreements at a meeting of the world's largest emerging economies, according to a Brazilian government spokeswoman. The environmental accords between Brazil and India, signed at the meeting of BRICS countries—Brazil, Russia, India, China, and South Africa—in the northeastern Brazilian city of Fortaleza, involve partnerships in projects addressing climate change, biological diversity, reforestation, conservation of freshwater resources, solid waste management, biofuels, air quality and medicines derived from plants.

India also agreed to provide Brazil with satellite data to help combat fires in the Amazon rainforest.

The presidents of the BRICS development banks signed a five-year agreement involving the joint financing of technological innovation projects, with an emphasis on renewable energy infrastructure, and agribusiness, according to a statement by Brazil's Development Bank.

BRICS leaders also agreed to create of their own development bank as an alternative financing source for infrastructure projects in developing countries.

### **92. Shipping Companies Form Industry Coalition to Promote, Enforce Sulfur Regulations**

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<sup>3</sup> Int J Environ Res Public Health. 2014 Jul 21; 11(7):7442-55. doi: 10.3390/ijerph110707442.

Trends of Non-Accidental, Cardiovascular, Stroke and Lung Cancer Mortality in Arkansas Are Associated with Ambient PM2.5 Reductions, Chalbot MC1, Jones TA2, and Kavouras IG3.

Maersk, Wallenius Wilhelmsen Logistics and nine other shipping companies formed an industry group July 7 to support enforcement of increasingly stricter sulfur content standards for maritime fuels to reduce emissions of pollutants harmful to public health and the environment.

Lax enforcement of the standards set out in Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL) not only compromises the effectiveness of the regulations but also puts companies complying with the standards at a competitive disadvantage, the newly formed Trident Alliance said in a July 7 statement.

Stena AB, American Roll-on Roll-off Carrier LLC, EUKOR Car Carriers Inc., Hoegh Autoliners Holdings A/S, J. Lauritzen A/S, Rickmers-Linie GmbH & Cie, Torvald Klaveness and Unifeeder A/S are the other members of the new coalition that have agreed to comply with the standards and work to ensure effective and even enforcement of the regulations.

In 2008, the International Maritime Organization agreed to revise MARPOL Annex VI to phase in, beginning in 2010, new marine fuel oil standards to curb emissions of sulfur oxides and particulates. The measures set sulfur caps for fuels used in ships operating in emission control areas (ECAs) in the Baltic Sea, North Sea, North American and U.S. Caribbean Sea and separate less strict sulfur limits for outside the ECAs.

Effective January 1<sup>st</sup>, the ships operating inside the ECAs must use fuel oil with a sulfur content of less than 1,000 parts per million, down from the 10,000 ppm limit set in 2010. In addition, the 35,000 ppm sulfur limit for fuel oil used outside the ECAs that has been in place since 2012 drops to 5,000 ppm in 2020, if a 2018 review of the standard demonstrates compliant fuel oils are available.

“Robust enforcement of the sulfur regulations is needed for health and the environment, and from the perspective of maintaining a level playing field, it is a business imperative,” Roger Strevens, vice president of environment at Wallenius Wilhelmsen Logistics and chairman of the Trident Alliance, said in a statement announcing the coalition. “Already during its formation, the Trident Alliance has raised awareness of the current shortcomings and related consequences, particularly in the European ECA. Now our work starts in earnest.”

Membership is open to any shipping company that makes a signed commitment to comply with the standards and is willing to collaborate to ensure the regulations are being enforced, the group said.

Reasons “for good or poor enforcement will vary” from nation to nation and there is “no one way to bring enforcement about,” the group said.

The Trident Alliance said it will pursue a variety of strategies, like increasing industry awareness of the standards, a transparent member compliance process and fostering innovation in enforcement technologies.

### **93. Air Pollution From Road Traffic Can Raise Blood Pressure**

High blood pressure is linked to long-term exposure to traffic-related air pollution, new research suggests. After accounting for lifestyle factors, socioeconomic status and pre-existing health conditions, the researchers found that a rise in traffic emissions of nitrogen dioxide corresponded to a rise in blood pressure of exposed individuals.

Long-term exposure to air pollution has previously been linked to an increase in blood pressure which in turn may increase the risk of heart attack or stroke. Traffic in particular is a major source of pollution and it is vital to understand the full range of its effects on public health.

This study examined a cross-section of the population to investigate the association between traffic-related air pollution and high blood pressure. The researchers recruited 3 700 people, aged 35 to 83 years old, from Girona, Spain, who were already being followed in an existing study (REGICOR). The researchers recorded lifestyle factors (e.g. smoking habits), socioeconomic status and health conditions (e.g. diabetes or pre-existing cardiovascular disease) using a questionnaire. They also recorded whether the participants were taking medication for raised blood pressure.

For their health assessment, the researchers took a series of blood pressure readings from each participant. Blood pressure is measured using two values: the systolic pressure that records the pressure in the arteries as blood is pumped from the heart, and the diastolic pressure which is the pressure in the arteries when the heart rests between beats. For this study, the researchers defined high blood pressure as a systolic pressure of 140 millimeters of mercury (mm Hg) or more, combined with a diastolic pressure of 90 mm Hg or more.

Using data from a dense network of air pollution sensors, the researchers created a model for nitrogen dioxide (NO<sub>2</sub>) levels in Girona and estimated the NO<sub>2</sub> levels outside each participant's home address, as an indicator for overall traffic pollution exposure. They also looked at how other factors, such as traffic noise, affected people's blood pressure.

Among individuals in the study who did not take medication for blood pressure, there was a statistically significant rise in systolic blood pressure of 1.34 mm Hg for each 10 micrograms per cubic meter increase in annual average NO<sub>2</sub>, after adjusting for exposure to traffic noise. The same association was found across the entire group, including both those that did and did not take medication, although it was weaker.

Considering only those on medication, the researchers did not find any significant association between NO<sub>2</sub> exposure and a rise in systolic blood pressure. However, they acknowledge that trying to account for the effects of such medication is extremely difficult. There was no association between NO<sub>2</sub> and diastolic blood pressure in any group.

Increased blood pressure from long-term exposure to air pollution may be explained by sustained inflammation or stimulation of the body to produce toxic chemicals. These effects lead to impairment of blood vessel function and stiffening of the arteries, say the researchers. These findings suggest that traffic-related air pollution can raise blood pressure, which in turn may lead to problems with the heart and blood vessels. The widespread nature of traffic related air pollution suggests that this is a serious public health concern.

#### **94. ExxonMobil Discusses HDME 50, Its New 0.10% Sulfur HFO-Like Bunker Fuel**

ExxonMobil Marine Fuels & Lubricants recently launched what it calls a new category of bunker fuel that handles onboard like Heavy Fuel Oil (HFO), but is compliant with the 0.10 percent sulfur cap that takes effect in Emissions Control Areas (ECAs) at the start of next year.

Iain White, field marketing manager at ExxonMobil Marine Fuels & Lubricants, recently talked to Ship & Bunker about its new Heavy Distillate Marine ECA 50 (HDME 50) fuel.

"There are virtually no cat fines, it has a high viscosity, but is low in sulfur," said White.

"The exact viscosity varies slightly between 45 and 80 cSt."

Currently, the product is only coming out of its Antwerp refinery, and White said it is available now on a spot or contract basis for delivery by barge in the ARA region.

"Production in other refineries is currently being reviewed," he said, meaning that future availability in North America has not been ruled out for vessels operating in the ECA covering the U.S. and Canada.

White did not reveal the exact pricing of the new fuel, but said it is competitive with MGO, which most operators without an alternative method of ECA compliance will otherwise use to meet the requirement.

The use of MGO presents a new challenge to operators who currently switch between 3.5 percent maximum sulfur and 1.0 percent maximum sulfur fuel oil bunkers, both of which are heated and handled onboard in the same way.

MGO, on the other hand, is used at ambient temperature meaning operators run the risk of thermal shock to engine components during fuel switchovers. "The risk of thermal shock is reduced, and at the same time the higher viscosity and greater lubricity of HDME 50 means it offers greater protection

"Some owners even need to use chillers for MGO, but as ExxonMobil Premium HDME 50 handles like HFO, you don't need to do that," said White.

"The risk of thermal shock is reduced, and at the same time the higher viscosity and greater lubricity of HDME 50 means it offers greater protection. It's also less volatile, which, of particular interest for the tankers, means it's a much safer product to use in a large boiler."

White explained that the origins of the product, which has been described as being more like a high viscosity distillate rather than an ultra-low sulfur fuel oil, is from a stream of product that was already available at the Antwerp refinery.

"It was something that was there already, just not used as a finished product. We tweaked it to the exact specification and the result is ExxonMobil Premium HDME 50."

ExxonMobil Premium HDME 50 has been already been tested with Wallenius Wilhelmsen Logistics (WWL) prior to its release to confirm its suitability for main and auxiliary engines and marine type boilers.

It has also received No Objection Letters from MAN Diesel & Turbo for use in the company's B&W two-stroke and B&W Holeby gensets.

## **95. Man-Made Warming Becomes Main Cause of Glacier Retreat, Study Says**





A view of the lake formed by meltwater from the Pastoruri glacier, as seen from atop the glacier in Huaraz, September 19, 2013. Photo: Mariana Bazo

Man-made greenhouse gas emissions have become the dominant cause of melting in glaciers from the Alps to the Andes that is raising world sea levels, according to a new study.

Human emissions accounted for an estimated 69 percent of loss of ice

from glaciers from 1991-2010, overtaking natural climate variations that had been the main driver of a retreat since the mid-19th century, researchers wrote in the journal *Science*.

Until now, scientists have struggled to quantify the impact of human behavior on glaciers because the frozen rivers of ice take decades, perhaps centuries, to respond to rising temperatures and shifts in snow and rainfall.

The study used historical observations of glaciers around the world, except in Antarctica, twinned with computer models to simulate all factors that could explain the retreat. It found that natural variations were not enough on their own, meaning man-made greenhouse gases played an increasing role. "This is more evidence of human influence on the climate," Ben Marzeion, of the University of Innsbruck in Austria and lead author of the study, told Reuters.

The scientists estimated that human influences accounted for only about 25 percent of glaciers' total retreat since 1850 - meaning that natural swings in the climate, such as changes in the sun's output, have long been dominant.

Many glaciers grew during a period known as the Little Ice Age from 1350 to 1850, perhaps caused by a natural decline in the sun's output or sun-dimming volcanic eruptions.

Michael Zemp, head of the World Glacier Monitoring Service at the University of Zurich, said snowfall declined after around 1850. Rising temperatures from about the 1890s, when wider burning of coal meant more greenhouse gases, hastened the thaw.

"The big majority of glaciers have been retreating over the past century," he told Reuters. "We even have an accelerated retreat in recent decades." Glaciers have also varied widely - many Alpine glaciers advanced in the 1970s and 1980s.

The new study estimated that water from melting glaciers has contributed a total of 13.3 cm (5 inches) from 1851-2010 to rising sea levels. Without human influences the rise would still have been 9.9 cm (4 inches).

Zemp said that greenhouse gases already in the atmosphere meant that glacier retreat and related sea level rise would continue for decades, even if emissions were to stop now.

Melting glaciers, especially in the Himalayas, also supply water vital to millions of people. A Chinese newspaper said that Tibet was warmer over the past 50 years than at any time in the past 2,000. (See above)

Pinning down a human influence on temperatures has been easier. A U.N. scientific panel said last year that it was at least 95 percent probable that mankind was the main cause of higher surface temperatures since 1950.

## **96. Deep Emissions Cuts Needed By 2050 to Limit Warming: U.N. Draft**

Deep cuts in greenhouse gas emissions of 40 to 70 percent by mid-century will be needed to avert the worst of global warming that is already harming all continents, a draft U.N. report showed. The 26-page draft sums up three U.N. scientific reports published over the past year as a guide for almost 200 governments which are due to agree a deal to combat climate change at a summit in Paris in late 2015.

It says existing national pledges to restrict greenhouse gas emissions are insufficient to limit warming to 2 degrees Celsius (3.6 Fahrenheit) above pre-industrial times, a U.N. ceiling set in 2010 to limit heatwaves, floods, storms and rising seas.

Average global surface temperatures have already risen by about 0.8 C (1.4 F) since the Industrial Revolution, the draft said.

"Deep cuts in greenhouse gas emissions to limit warming to 2 degrees C ... remain possible, yet will entail substantial technological, economic, institutional, and behavioral challenges," according to the draft due for publication in Copenhagen on Nov. 2 after rounds of editing.

Cuts in greenhouse gases, mainly from burning fossil fuels, of between 40 and 70 percent by 2050 would be needed from 2010 levels to give a good chance of staying below 2C, according to the Intergovernmental Panel on Climate Change (IPCC) draft.

Such a shift would also require a tripling or a quadrupling of the share of low-carbon energies including solar, wind or nuclear power, it said. That would be a radical change. Emissions, buoyed by coal-fuelled industrial growth in emerging economies led by China and India, rose to 49 billion tonnes in 2010 from 40 billion in 2000.

The IPCC says it is at least 95 percent probable that human influences are the main cause of climate change, although opinion polls show that many people doubt such findings and reckon that natural variations are to blame. "Human influence on the climate system is clear, and is estimated to have been the dominant cause of the warming observed since 1950," the draft says.

The draft Synthesis Report, dated April 21, merges data from three previous IPCC studies that focused on the science of climate change, the impacts and possible solutions. It clarifies many findings but does not include new research.

A final draft will be sent to governments at the end of August before editing at the Copenhagen meeting from Oct. 27. It will round off a year-long cycle of IPCC reports running to thousands of pages by hundreds of experts.

Still, final drafts are often similar to earlier work.

The draft says climate change is causing more heat extremes, disrupting rainfall, harming many crop yields, causing an acidification of the oceans and thawing ice in Antarctica and Greenland that are raising sea levels. Unchecked climate change was projected to damage economic growth and can even indirectly increase risks of armed conflict by aggravating underlying causes such as poverty, it says.

Costs of strong action to cut emissions would slow consumption growth by a fractional 0.06 percentage point a year this century from an estimated 1.6 to 3.0 percent, it says.

The IPCC focuses on consumption, which is gross domestic product minus investments, in case big investments are needed to shift from fossil fuels to renewable energies. That could stoke GDP and give a misleading impression of economic benefits.

The IPCC says it is impossible to compare costs and benefits of action for any given temperature level. Many factors are hard to quantify - a shift from fossil fuels, for instance, could curb health bills by reducing air pollution.

### **97. For Most of Us, Global Warming Has Become 'Normal' Climate**

Global warming has been going on for so long that most people were not even born the last time the Earth was cooler than average in 1985 in a shift that is altering perceptions of a "normal" climate, scientists said. Decades of climate change bring risks that people will accept higher temperatures, with more heatwaves, downpours and droughts, as normal and complicate government plans to do more to cut emissions of greenhouse gas emissions.

"Because the last three decades have seen such a significant rise in global and regional temperatures, most people under the age of 30 have not lived in a world without global warming," Michel Jarraud, Secretary-General of the U.N.'s World Meteorological Organization (WMO), told Reuters. "On human time scales the changes in our climate can seem gradual, so we will increasingly need to remind the public about just how rapid and unprecedented the changes truly are," Jarraud said.

February 1985 was the last month when global temperatures were below the 20th century average, according to the U.S. National Oceanic and Atmospheric Administration (NOAA), a leading source of global temperature data. Meanwhile, the estimated median age of the world population in 2014 is 29.4 years, meaning half are older and half younger, according to Francois Pelletier of the U.N. Population Division. Taken together, the NOAA and U.N. yardsticks mean the world's 7.2 billion population has shifted in recent weeks for the first time to a majority born since the last cool month.

"People have to get used to continuous change in the climate," said Thomas Peterson, principal scientist at NOAA's National Climatic Data Center and president of the WMO Commission for Climatology.

Some other weather agencies, using differing methods and baselines, estimate later dates for the most recent cold month than NOAA. The WMO, which compiles annual data, says 1985 was the last colder-than-average year.

Global averages go largely unnoticed because individuals experience weather and climate locally - this past winter was bitterly cold in parts of North America, for instance. But the overall warming trend is clear.

Peter Thorne, a climate researcher at the Nansen Environmental and Remote Sensing Center in Bergen, west Norway, said people are more likely to remember extreme weather events than to notice any fractional rise in temperatures. "Heatwaves, droughts and extreme floods are more likely to trigger associations with climate change," he said. And more extremes could in turn put pressure on governments to act.

Almost 200 governments have agreed to work out a deal to slow global warming at a summit in Paris in late 2015, mainly by cutting emissions of greenhouse gases from cars, power plants and factories. Governments have promised to limit warming to below 2 degrees (3.6F) above pre-industrial times - average temperatures have already risen by about 0.8C (1.4F).

Peterson said historical records of average temperatures, used by everyone from farmers planning crops to companies deciding how much insulation to install in new buildings, were no longer a reliable guide to the future. His WMO commission said last month that the concept of "normal" weather should to be updated more frequently to take better account of warming. Currently, the WMO period for normal weather is 1961-1990 and is due to be replaced by 1991-2020 in 2021. The Commission wants rolling updates every decade, meaning the current period would be 1981-2010 and become 1991-2020 in 2021.

#### **98. Sulfur Watch: Supply of ECA Compliant MGO Improving**

Fuel test data indicate that supply of marine gas oil (MGO) that meets the upcoming emission control area (ECA) limit of 0.10% sulfur has been improving. A comparison of MGO test data from May, June and July this year with the same period a year ago shows that the share of global samples that tested at or below 0.10% sulfur has grown from 76.98% in 2013 to 81.66% in 2014.

The data from Lloyd's Register FOBAS and Guardian Marine Ltd, available via Bunkerworld, show that the share of MGO meeting a 1.00% sulfur limit increased in most regions, and rose dramatically in parts of Asia.

One of the most notable developments has been the East Asia region, where the share of MGO samples testing at or below 0.10% has increased from 33.87% in May/June/July last year to 77.48% for the same period this year. This region includes Hong Kong, where a locally imposed 0.05% sulfur limit for all MGO supplied at the port, in force since April 1 this year, has been remarkably successful. MGO in Hong Kong used to have a high average sulfur content, and until recently, very little MGO supplied in the port was below 0.10% sulfur. During the first half of 2013, only a little over 12% of MGO supplied in Hong Kong was at or below 0.10% sulfur.

In South East Asia, where a huge share of the MGO test data comes from Singapore, the share of samples that tested at or below 0.10% was up from 37.71% in May/June/July last year to 41.18% for the same period this year.

An increase in MGO samples that are low in sulfur has also seen the average test values decrease. In Singapore, the sulfur average for MGO was 0.49% in 2012, falling to 0.38% in 2013 and 0.34% for the first half of 2014.

South Asia, which includes India and Sri Lanka, has also seen a dramatic change. In May/June/July last year, the share of MGO samples testing at or below 0.10% sulfur was just 11.11%. This had increased to 50% in the corresponding period this year.

The only notable exception to the trend was the South American Atlantic region, where the share of MGO at or below 1.00% sulfur fell from 45.83% for the May/June/July period in 2013 to just 29.79% in the same period this year.

Supply of low sulfur MGO appears to have increased in the South American Pacific region, where the share went up from 46.67% for the May/June/July period in 2013 to 64.29% in the same period this year.

For Africa, the share of low sulfur MGO has gone from 44.6% to 59.04%, while the Middle East region, which includes the Fujairah bunker supply hub, has seen the share of MGO testing at or below 0.10% sulfur rising from 40.48% in May/June/July 2013 to 55.55% a year later.

There has been little change across ports in Europe and North America, where low sulfur MGO has been dominating market supply for some time. In Europe, less than 4% of MGO supplied was above 0.10% sulfur in 2013 while across the US and Canada, less than 6% of MGO samples exceeded 0.10% sulfur in 2013.

The spread of low sulfur MGO has been driven by European Union (EU) regulations, where a requirement for vessels at berth to use fuel with no more than 0.10% sulfur has been in force since the start of 2010. EU regulations also call for all MGO used or sold within EU territory to not exceed 0.10% sulfur.

The data bode well for operators looking to find compliant fuels for ECA operations in 2015, even outside the designated ECAs in North Europe, North America and US Caribbean. The data could be skewed, however, by a tendency for operators to test low sulfur MGO more than high sulfur MGO.

Buyers will need to specify the sulfur content when placing orders, and will likely have to pay a premium for MGO sold to meet the 0.10% sulfur limit in ports where both low sulfur and higher sulfur MGOs are marketed.

### **99. Ship Emission Figures Show Positive Effects of Slow Sailing**

Global greenhouse gas emissions from the shipping sector dropped by 13% between 2007 and 2012 as a result of the economic crisis, according to a recent report for the International Maritime Organization (IMO). The report, the IMO's third assessment of the sector's emissions, shows widespread reductions in ship speed as operators tried to cut costs. An average reduction of 12% relative to design speed led to a 27% fall in average daily fuel consumption.

However, the result of this and historically low activity levels is a "latent emissions increase" that might be realized when the market improves, the report warns.

Global demand for shipping is expected to keep growing over the period to 2050, resulting in a projected rise in CO2 emissions of between 50% and 250% under a business-as-usual scenario.

The report's authors, led by University College London's Energy Institute, modelled 16 scenarios with different economic conditions, levels of fossil fuel use and air pollution controls, and with and without further efficiency rules. Only one showed a decrease in emissions relative to 2012.

The average projected increase in emissions between 2012 and 2020 across the scenarios is 7%. For 2050, it is 95%.

Estimated greenhouse gas emissions from shipping vary depending on the methodology used but the main 'bottom-up' approach taken by the report suggests the whole sector emitted around 972 million tonnes of CO<sub>2</sub> equivalent in 2012. This was 2.5% of global greenhouse gas emissions that year.

Most of the emissions are from international journeys and the biggest contributors are container ships, bulk carriers and oil tankers. Of these, container ships have slowed down most – by as much as 70% for some size categories – but this is the group that also saw the smallest fall in emissions between 2007 and 2012.

Emissions of N<sub>2</sub>O, volatile organic compounds and carbon monoxide are expected to rise roughly in step with CO<sub>2</sub>, but a greater increase is predicted for methane as more ships switch to liquefied natural gas. Emissions of particulates, NO<sub>x</sub> and SO<sub>x</sub> should increase more slowly as a result of tightening emission controls.

For the Clean Shipping Coalition of NGOs, the report shows the huge emission reductions that can be achieved by slowing ships down.

"The question now is will the industry keep reaping the benefits of slow speeds or will all these emission reductions be lost when the markets pick up, capacity tightens and ship speeds start to rise?" it said.

The report will be discussed at the IMO's environment committee in October.

## **100. Cooking, Pollution Linked To High Blood Pressure in China**

Women in China who are exposed to pollution from cook stoves and highways face a greater risk of high blood pressure, researchers said. The study published in the Proceedings of the National Academy of Sciences focused on the role of black carbon, which after carbon dioxide is the second leading human-caused emission driving climate change.

Black carbon comes from burning wood, coal and fossil fuels. About half of all Chinese households cook with coal and wood, the researchers said.

The study involved 280 women living in a rural area of north-western Yunnan province, with an average age of 52. Eighteen per cent were overweight and four per cent were obese at the start of the survey. The women wore portable air samplers that collected air particulate matter (PM) smaller than 2.5 micrometers a size commonly associated with adverse health effects.

Black carbon exposure was linked to higher blood pressure, a leading risk factor for heart disease.

"We found that exposure to black carbon pollutants had the largest impact on women's blood pressure, which directly impacts cardiovascular risk," said lead author Jill Baumgartner, an

assistant professor at McGill University. "In fact, black carbon's effect was twice that of particulate matter, the pollutant measured most often in health studies or evaluating cleaner cook stoves."



Furthermore, living within about 200 meters (yards) of a highway was associated with a threefold higher systolic blood pressure -- the greater of the two numbers that measure blood pressure -- than women who lived further from a highway. "We found an indication that the cardiovascular effect of black carbon from biomass smoke may be stronger if there is co-exposure to motor vehicle emissions," said the study.

Reducing such exposure "should lead to a reduction

in the adverse health and climate impacts of air pollution."

Previous studies in Latin America have shown that when older women switched from traditional open fire cook stoves to less-polluting chimney stoves, their blood pressure decreased. "We found that black carbon from wood smoke negatively affects cardiovascular health, and that the health effects of wood smoke are exacerbated by co-exposure to motor vehicle emissions," said Baumgartner.



Black carbon from wood smoke negatively affects cardiovascular health, and the effects are exacerbated by co-exposure to traffic emissions, says researcher. – Filepic

"Policies that decrease combustion pollution by replacing inefficient wood stoves and reducing traffic pollution will likely benefit both climate and public health."

**101. Roads Expanding Fast Worldwide, Better Planning Needed To Aid Food Output:**

### Study

New roads long enough to girdle the Earth 600 times are expected to be built by 2050 and better planning is needed to protect the environment while also raising food production, a study showed.



The study in the journal Nature showed that roads can aid farmers, especially in developing nations where food production is held back by a lack of access to markets or to fertilizers and other technologies.

But too often, new roads slice through remaining wildernesses in the Amazon, New Guinea, Siberia or the Congo Basin, which are home to valuable species of animals and plants and help to slow climate change by storing greenhouse gases.

"While new roads can promote social and economic development, they can also open a Pandora's box of environmental problems," a team of scientists from Australia, Malaysia, the United States, Britain and Costa Rica wrote in the study.

The report's maps showed that 12 percent of the world land area could benefit from roads to help raise farm output with little environmental damage, such as areas of India, central Europe and Asia, North America and the Sahel in Africa.

New roads likely to be built by 2050 would total 250 million kms (155 million miles), a 60 percent gain from 2010 and long enough to encircle the planet more than 600 times, it said.

Lead author William Laurance, of James Cook University in Australia, told reporters that the maps were "just a starting point" for a wider debate about the economic impact of roads. Many other local factors, such as keeping costs down by taking the shortest route, usually determine routes. Shorter roads also mean less pollution by vehicles.

"What we're attempting is to put road-building into a wider context," Laurance said. "There are a lot of local factors that will come into actual road planning -- but one of the things that's been ignored so far is the 'big picture'."

Many other studies have shown that roads boost growth. A World Bank report this year about an expansion of the road network in Brazil since the 1960s found that "roads are shown to account for half of per capita GDP growth".

The maps tried to value the animals and plants in each region and gauge the amount of carbon stored in vegetation, a natural buffer against climate change. They also created an index to value agricultural production.