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EU Environment Committee Backs Cuts to Air Pollutants

A draft European Union law setting binding cuts to be achieved by 2030 in emissions for a number of air pollutants should be made stricter compared to the original proposal, lawmakers on the European Parliament environment committee said on July 15th. Environment committee lawmakers voted 38–28, with 2 abstentions, for a revision of the 2001 EU National Emissions Ceiling Directive (NEC Directive, 2001/81/EC), which sets country-by-country emissions limits for ammonia, non-methane volatile organic compounds and sulfur dioxide.

Currently, the NEC Directive contains emission limits that EU countries were required to comply with by 2010. The European Commission, the EU's executive arm, proposed in December 2013 to update the law with new limits for 2020 and 2030. The NEC Directive implements the EU's commitments under the Gothenburg Protocol to the United Nations Convention on Long-Range Transboundary Air Pollution, which aims to limit the main pollutants that cause acid rain.

The revision of the EU directive proposed in December 2013 was intended to confirm 2020 limits that the EU agreed to in May 2012 in the form of amendments to the Gothenburg Protocol. In addition, the commission's proposed directive set limits for 2030 and added limits for fine particulate matter and methane, which are not covered by the current NEC Directive.

For sulfur dioxide lawmakers backed an emissions cut of 83 percent to be achieved by 2030 relative to 2005 compared with the 81 percent cut the commission proposed. For nitrogen oxides, the committee backed an EU-wide cut of 72 percent compared with the commission's 69 percent, and for particulate matter, the committee approved a 58 percent cut compared with the commission's 51 percent.

Lawmakers also backed binding reductions of the pollutants by 2025 and said limits for mercury should be added to the directive.

To be finalized, the update to the NEC Directive must be ratified by the full European Parliament and agreed to by the Council of the EU, which represents the governments of member states. European Parliament spokesman Baptiste Chatain told the press that the plenary European Parliament vote on the version of the law approved by the environment committee would take place in October, but it was uncertain if the committee's amendments would be retained. The amendments were pushed through by a coalition of lawmakers from the European Parliament's center-left and Green groups, but center-right groups that believed the amended limits were too strict will likely be able to reverse the amendments in a plenary vote, Chatain said.

Separately, environment committee lawmakers voted 59–6 in favor of a draft EU directive that would set sulfur dioxide and nitrogen oxide limits for medium combustion plants that generate electricity or provide heat or steam. Medium combustion plants are defined as those with a rated thermal input between 1 and 50 megawatts. The draft directive would phase in common minimum EU emission standards for the plants between 2025 and 2030. Medium combustion plants are regulated at the national rather than EU level, and EU countries would be able to impose tougher limits than those in the draft directive.

The European Parliament and Council of the EU negotiators have informally agreed to the medium combustion plants directive, but it must be ratified by both institutions. Following the
approval of the environment committee, the full European Parliament will vote on the directive in October. Andrzej Grzyb, a Polish center-right lawmaker who is the European Parliament's lead negotiator on the directive, said that text was “a balanced approach between the environmental impact of the directive on the one hand and reducing the burden on operators,” which are mostly small and medium-size companies.

According to the European Commission, there are about 143,000 combustion plants in the EU that would be affected by the directive.

The commission proposed the medium-size combustion plants directive alongside the revised NEC Directive in December 2013.

2. Air Pollution Killing Londoners, Mayor Issues Plea

London's pollution killed 9,500 people in 2010, the first study to quantify the full danger, prompting Mayor Boris Johnson to renew his calls for abandoning the expansion of Heathrow Airport on air quality grounds. About 5,900 deaths were the result of nitrogen dioxide, a pollutant produced by diesel engines, according to the report released July 15 by King's College London for the mayor's office. The others were due to particulate pollution known as PM2.5.

“I need the help and strong support of the government and the [European Union] to effectively win London's pollution battle and target the enormous amount of toxic air transported into our great capital,” Johnson said. “My greatest priority remains to protect the well-being and environment of Londoners.”

The study is the first to quantify deaths from nitrogen dioxide, a gas whose emissions authorities in London have struggled to contain as emissions from diesel engines continue to spread. The capital has been in breach of European Union limits on nitrogen dioxide since 2010, and the government projects that it won't comply until at least 2030, opening up the country to legal action and fines from EU authorities.

“Evidence on the health effects of nitrogen dioxide has strengthened in recent years, including evidence linking long-term exposure to nitrogen dioxide with mortality,” said Heather Walton, an environmental researcher at King's College. “It is now thought that there is an additional effect beyond that previously quantified for the effects of long-term exposure to PM2.5.”

Roads around Heathrow, the busiest U.K. airport, are among those in breach of EU rules. Johnson's office said that the latest study means “the government must now rule out expansion of Heathrow.” Heathrow Chief Executive Officer John Holland-Kaye said on July 1 that the hub’s plans will meet air-quality rules. The government's Airports Commission said the hub presents the “strongest case” for expansion of airport capacity in southeast England.

The Airports Commission left a final decision in the hands of Johnson and Prime Minister David Cameron's Conservative government, which is split on the issue. Cameron has said he will decide by the end of the year.

Johnson has brought in measures to clean up the exhausts of taxis and the capital's bus fleet. He also is planning an “ultra-low emission zone” for central London, which will encourage vehicles to be low- or zero-emissions from 2020.
3. Diesel Exhaust Found Causing Health Hazards In EU Cities

The automotive industry needs to face up to the hazard to health posed by its diesel engines. That stark reality was brought home again to Europeans and, in particular, Londoners last week when Transport for London and the Greater London Authority revealed that an additional 5,900 early deaths annually in the EU’s largest city are attributable to long-term exposure to nitrogen dioxide (NO2), a toxic gas emitted in urban areas largely from diesel engines.

Concern about the health effects of NO2 is growing fast. The gas was known to irritate lungs and cause respiratory infections and asthma, including acute respiratory illnesses in children. It has also been linked to birth abnormalities. But this new research by King’s College London estimates for the first time the number of premature deaths caused. The study also shows an additional 3,500 deaths are caused by PM2.5, bringing the total number of people who die early because of air pollution annually in London to 9,400.

In London half of the nitrogen oxides (NOx, which in the air quickly become NO2) are emitted by diesel vehicles, and another 15% from diesel construction equipment. To deal with the problem, in 1990, European laws were introduced to reduce emissions from exhaust pipes. These standards have been progressively tightened, with the most recent Euro 6 standards for diesel cars commencing in 2014 having a limit of 80 milligrams of NOx per kilometer. So why are 5,900 Londoners still dying each year from NO2 pollution?

While effective on paper, the limits are simply not being met on the road, where cars emit on average seven times what they are supposed to (and up to 22 times in the case of an Audi A8). The reason is an obsolete laboratory test used to measure compliance meaning that there has been little improvement in actual NOx emissions since Euro 3 standards were introduced more than 15 years ago.

4. DEFRA Told To Prepare For 40% Budget Cut

Government departments including the Department for Environment, Food and Rural Affairs have been asked to prepare for spending cuts of up to 40% over the next four years as the government looks to slash public spending by £20 billion. Chancellor George Osborne is seeking to make deep cuts to Departmental budgets.

In a move which is feared could hit Defra’s future work on air quality, on July 21st the Chancellor launched a Spending Review calling for all departments which do not have protected budgets to model savings of 25% and 40% a year within their budgets by 2019/20.

The announcement could hit Defra particularly hard, as the Department has faced some of the deepest departmental cuts since 2010 and already scaled back its work in several areas alongside numerous job losses.

It also comes as the Department prepares a new UK air quality plan for public consultation later this summer to meet EU nitrogen dioxide limits, while it is also engaged in discussions at EU level over a new package of air quality legislation.

A report by the parliamentary Environment, Food and Rural Affairs (Efra) select committee published in March voiced concern that the “hollowing out of Defra has left the core Department less effective in persuading decision makers in other government departments and Brussels to follow its agenda”. Then-committee chair Anna McIntosh MP said the Department must “punch
above its weight if it is to deliver cost-cutting aims for the environment, rural communities and British farming, at home and in Brussels”, adding that “we also need to know what the impact of cuts will be on policy delivery”.

Proposed budget cuts also affect other departments with environmental and air quality remits, including the Department for Transport (DfT), Department of Energy & Climate Change (DECC) and the Department for Communities and Local Government (DCLG). Another potential victim could be the Environment Agency, which is responsible for air quality regulation and assessment in local planning.

Responding to the Chancellor’s budget cuts announcement, the Local Government Association (LGA) – which represents 414 authorities in England and Wales – said councils had already made £20 billion in savings since 2010 and that for many councils there were “few efficiencies left to be made and these alone will not be enough to cope with further funding reductions”.

Cllr Gary Porter, chairman of the LGA, said vital council services would “struggle to continue at current levels” amid a possible maximum 40% cut by 2020, which would equate to around £7 billion. He said: “If our public services are to survive the next few years, we urgently need a radical shift in how public money is raised and spent, combined with proper devolution of decision-making over transport, housing, skills and social care to local areas.

“Fairer funding for local services, and the freedom to pay for them, will allow councils to tackle the big issues facing their residents and protect services which bind our communities together and protect our most vulnerable.”

Announcing his Spending Review, Chancellor George Osborne said: “This Spending Review is the next step in our plan to eliminate the deficit, run a surplus and ensure Britain lives within its means. “We’ll invest in our priorities like the NHS and national security. Elsewhere in government, departments will have to find significant savings through efficiencies and by devolving power, so people have a greater say over the issues that affect them and their communities. We’ll deliver more with less.

The final outcome of the Spending Review will be published on November 25.

5. Germany’s New Wind-to-Hydrogen Plant Expands the Infrastructure

On July 2, the world’s largest industrial gas supplier opened a plant that uses wind power to convert water into gas. That completes the circle for an almost carbon-free fuel—from the extraction of the gas to refueling facilities and the vehicles themselves—and also boosts hydrogen’s green credentials, according to Munich-based Linde.

The research plant on the banks of the River Rhine, dubbed Energiepark Mainz and developed with Siemens AG, adds to two other significant fuel cell developments this year. Toyota Motor Corp., the car industry’s biggest manufacturer, is starting production of its hydrogen-fueled car, the Mirai, and a group including Linde, Royal Dutch Shell Plc, Daimler AG starts the roll out of a standardized network of hydrogen-friendly refueling stations across Germany.

“The whole thing only works if we have three steps: the generation of the hydrogen, the refueling and the cars,” said Andreas Opfermann, Linde’s head of research and development. “We are in a better situation than battery cars where every country has its own plugs, its own level of voltage. We now have standard fueling stations.”
Tesla Chief Executive Officer Elon Musk has argued that most commercial hydrogen to run fuel cells is made from natural gas in a process that consumes energy and emits carbon. Hydrogen is also dangerous to store and transport, he has said.

Still, hydrogen-fueled cars have two main advantages over their battery-powered rivals, said Salim Morsy, a New-York based analyst for Bloomberg New Energy Finance. “They are faster to refuel and have much longer ranges than electric ones,” the analyst said. “It can take just five minutes to refuel a hydrogen car for a range of 400 miles compared to up to a seven hour charge for an electric vehicle to travel just 200 miles.”

Linde says Energiepark Mainz could help put an end to the criticism that hydrogen fuel cells are only marginally more environmentally friendly than traditional combustion vehicles and allow the gas to be extracted anywhere there is wind and water. BMW AG also is starting tests of a vehicle powered by hydrogen this month. “When we heard the Mirai was going into production it was one of the most important announcements for our industry,” said Robert Adler, who has spent 15 years as Linde’s chief engineer at its hydrogen research site on the outskirts of Vienna. “It would be a shame if it didn’t take off, because we’ve built up a real expertise.”

While there is global capacity for thousands of fuel cell-powered vehicles, many are private or in bad locations, according to New York-based BNEF analyst Claire Curry. She expects global automotive demand for hydrogen to increase fivefold by 2019, from the current 600 kilograms a day as cars such as the Mirai are sold.

The German hydrogen initiative—dubbed “H2 Mobility” and also including Air Liquide SA, Total SA and Austrian gas station operator OMV AG—aims to install 400 hydrogen refueling stations in Europe’s largest economy by 2023 at a cost of some 350 million euros ($388 million). About half of that will be funded by state subsidies, according to Linde’s Opfermann. Each hydrogen-fueled car would thus be within a 50-minute drive of a gas station. “It’s not ideal. We’d prefer 5,000, but the car companies say that’s enough coverage to have commercial, attractive public infrastructure, particularly compared to the slow refueling of batteries,” Opfermann said.

Rather than building more gas stations, the aim is simply to add the new pump and equipment to existing sites, taking advantage of operators’ customer infrastructure.

One kilogram of hydrogen can fuel a car for 100 kilometers and each tank typically has four kilograms of capacity. If extracted from natural gas, it can cost about 8 euros per kilogram. Some can cost 10 euros per kilogram when made by electrolysing water with wind power, a reflection of the current higher cost of wind energy.

“There was a long time where we built up our knowledge base without really growing our revenue,” said Linde’s Adler. “Now things are getting exciting.”


The heat wave gripping Europe—the most severe in a dozen years for the continent and much longer in some individual countries—is the kind of weather pattern that is likely to become more common as a result of climate change, according to the World Meteorological Organization and World Weather Attribution at Climate Central.
Europe is in the midst of its strongest heat wave since 2003, and in some countries the records date back much further: In early July, temperatures recorded at London's Heathrow Airport were the highest ever recorded anywhere in England for the month of July. And in parts of Germany, temperatures were the highest seen since record-keeping began in 1881.

In late June, the Spanish capital of Madrid recorded its highest temperatures since 1945.

The Geneva-based WMO said July 6 that the heat wave was unusual in part because it has come so early in the summer, with high temperatures being recorded starting June 27. It said wildfires recorded in the U.S. and China and another heat wave in southern China are part of the same severe weather trends causing the heat waves.

Although forecasters cannot attribute specific weather phenomena to climate change, they say it is clear that severe weather will become “more intense, more frequent and longer,” the WMO said.

7. **Chinese-Built Zero-Emissions Electric Bus Prepares For Service in London**

The world’s first pure electric zero emission double decker bus, designed and built by BYD, is to enter service in October 2015.

For years, London’s red double-decker buses have dominated the capital, where nearly 1,000 routes are operated by 8,700 buses, many of them double-deckers. Although there has been a gradual move to hybrid vehicles, many are still diesel-powered. This will all change in October, when the world’s first pure electric zero-emission double-decker bus, designed and built by Chinese automotive manufacturer BYD, will enter service in London.

The electric double-decker bus represents a technology breakthrough in public transportation, said Isbrand Ho, managing director of BYD Auto Europe. “In the past, electric vehicle manufacturers have produced electric buses with three batteries – at the vehicle’s front, back and top – but this design would not work with the double-decker bus. BYD’s advanced technology is able to make the batteries more compact, so the battery on top of the bus is no longer required,” he said.

“London has the most dense population in Europe and has the highest visibility of double-decker buses. London is replacing 700 to 800 double-decker buses every year, so there is a big market.”
According to Ho, the inspiration to supply double-decker buses to London came about two years ago when Wang Chuanfu, chairman of BYD, met with London mayor Boris Johnson. “Boris Johnson said to our chairman, ‘If you can make it, I will buy it’.

“Actually, electric cars came before gasoline cars, but because of the weakness of the batteries, gasoline cars became more successful. But now is the time for electric cars to take over gasoline cars,” Ho said, explaining that the environmental benefit and the fuel cost savings of electric vehicles give them a distinct advantage.

Denis Naberezhnykh, the head of ultra-low emission vehicle and intelligent transportation system technology at the UK’s Transport Research Laboratory, praised BYD’s achievement. “Until now, fully electric double-decker buses have been considered unfeasible. This is mainly due to the competing requirements for battery space and passenger capacity,” Naberezhnykh said.

He says unlike their single-decker counterparts, double-decker buses in London typically cannot accommodate batteries on the roof due to the height limits of the vehicle. “A purely electric double-decker bus not only provides further options for the electrification of London’s bus fleet, but with growing pressure to improve air quality in cities and the impending introduction of the ultra-low emission zone in London, it provides another way of reducing emissions,” Naberezhnykh said. The zone is set to launch by 2020.

“Over the next few years, we can expect to see a growing shift toward the electrification of public transport vehicles, as we seek to reduce air pollutants in urban centers and improve local air quality. Ensuring that these vehicles are able to operate the demanding duty cycles without excessive charging time requirements will be a vital factor in accelerating this shift.”

London has already introduced hybrid buses in a bid to reduce the environmental impact of public transport.

The latest development is the New Routemaster bus, designed by English designer Thomas Heatherwick, which is 15% more fuel efficient than the existing hybrid buses and 40% more efficient than conventional diesel double-deckers. The first New Routemaster vehicles, nicknamed “Boris buses” after the mayor of London, began service on a limited number of routes in 2012, and it is planned that more than 600 of the buses will enter passenger service by 2016.

BYD chose London for the launch of the all-electric double-decker bus because of the vehicle’s iconic significance, but the same technology can be applied to many other markets, including European markets such as Germany and Asian markets such as Hong Kong, Malaysia and Singapore. Many of these markets would require localization of design to suit customer needs, for example, with regards to wheelchair access, but the core technology of battery, control system and electric drivetrain would all be the same, according to Ho.

The first batch of BYD double-decker buses will consist of five vehicles, all manufactured in China. Ho says BYD will explore the possibility of local manufacturing if the quantity supplied increases.

BYD won’t disclose the cost of the buses, explaining that it is highly dependent on customer specifications and volume, but says the electric buses can help save about 70% of the costs of fuel, producing long-term savings.

The latest New Routemaster costs £325,000 each, compared with £200,000 for an existing hybrid vehicle, according to the mayor’s office.
“For a bus, the largest part of the cost is actually the fuel, so over the long term electric vehicles can give a big cost saving effect,” Ho says. The main challenge for electric buses is the lack of charging points, as is the case with other electric vehicles, because the technology is still relatively new, he says.

His team is working with Metroline, the London bus operator, to install charging infrastructure at bus depots, and is providing guidance on how to install the charging points, where to install them, what type of power requirements are needed. The company has invited Metroline engineers to China to see similar facilities.

Two years ago, BYD supplied two single-decker buses to the London bus operator Go-Ahead, which are still in use. BYD also helped Go-Ahead with installing the charging points. The charging points are installed at bus depots, where the buses are parked at night, so the way the buses operate during the day is not affected. Most bus routes can be serviced for a full day on a single charge, needing only four hours to recharge during the night, using cheaper off-peak electricity, he says.

Ho says in Europe the company hopes to focus on the commercial vehicle market first, producing buses and taxis, because these vehicles can reach a wider user base and help BYD to build up a brand in Europe. BYD has supplied vehicles to many countries, including Sweden, the Netherlands, Denmark, Belgium, the UK and Spain. Its European headquarters is in the Netherlands. Looking ahead, Ho is optimistic about growth in the use of electric vehicles in Europe, because cities are becoming increasingly densely populated with many people preferring to live in the city, creating a big demand on public transport.

Meanwhile, the environmental credentials of the electric vehicles is also a big contributor to this trend, as European cities move increasingly to reduce pollution, he says.

According to China’s ministry of industry and information technology, some 19,000 plug-in electric cars, buses and trucks were produced in China in May. The International Energy Agency says China ranks third on the list of countries using pure electric cars, with 80,000 sold since 2008.

8. Vehicular Air Pollution Leading Cause of Heart Disease

Air and noise pollution are environmental health risks with severe consequences for heart health, according to the European Society of Cardiology, which is asking for help from lawmakers to reduce these risks. Recently, the European Society of Cardiology, ESC, together with the European Association for Cardiovascular Prevention and Rehabilitation and the European Heart Network, officially launched the “Environment & the Heart Campaign” to raise awareness about the need to create healthy environments for the protection of heart health and to encourage policymakers’ action.

The campaign was launched at ESC Congress, the world’s largest and most influential cardiovascular event, gathering over 30,000 delegates for five days in London.
Environment and the Heart is the spotlight theme of ESC Congress 2015, and new research will be presented on this increasingly important risk factor.

Cardiovascular diseases, including heart disease and stroke, are the number one killer worldwide. In Europe, they cause the deaths of more than 10,000 people daily – more than all cancers combined, according to European Cardiovascular Disease Statistics 2012.

The ESC says cardiovascular diseases account for 80 percent of all premature deaths due to air pollution. The effects may be so serious that experts advise heart disease patients to stay inside during rush hour traffic.

Particulate matter and nitrogen dioxide pollution are associated with increased risk of severe heart attacks despite being within European recommended levels, according to research presented at the ESC Congress today by Dr. Jean-Francois Argacha, a cardiologist at University Hospital Brussels, in Belgium.

“The World Health Organization considers air pollution as one of the largest avoidable causes of mortality,” said Dr. Argacha. “Besides the pulmonary and carcinogenic effects of air pollution, exposition to air pollution has been associated with an increased risk in cardiovascular mortality.”

Ambient air pollution is a mixture of particulate matter and gaseous pollutants such as sulfur dioxide (SO2), nitrogen dioxide (NO2) and ozone (O3).

Fine particle pollution, also called PM2.5, has the ability to reach the lower respiratory tract and carry a large amount of toxic compound into the body. PM2.5 and NO2 originate from the combustion of fossil fuels such as emissions from industrial plants or vehicles.

To combat this risk in the UK, the Supreme Court has ordered the government to submit air quality plans to the European Commission by the end of 2015.

The UK Supreme Court ruling came after the government failed to comply with European limits on nitrogen dioxide set to protect health and outlined in the European Union Air Quality Directive.

In June, the European Commission took Belgium and Bulgaria to court over poor air quality, and Sweden was given a final warning.

The European Court of Justice in Luxembourg has the power to impose daily fines if EU member states are found to be in breach of EU law.
Noise pollution also increases the risk of cardiovascular disease, including hypertension and heart disease. In Europe, it is estimated to contribute to at least 10,000 premature deaths due to heart disease and stroke each year.

Public policies can do much to protect health and, ultimately, to reduce the burden of cardiovascular disease in Europe.

Healthcare professionals, patient advocates, policymakers and the wider public are invited to join the campaign by signing the online petition on change.org/p/environment-and-the-heart.

The outcome of the campaign together with the collected signatures will be presented to European Commissioners for Health, Environment, Climate Change and Transport in Brussels on World Heart Day, September 29, which this year is focused on creating heart healthy environments.

The campaign comes at a crucial time as Paris prepares to host the UN Climate Change conference from November 30 to December 11. There, world leaders are expected to sign a new international agreement to keep global warming below 2°C relative to pre-industrial levels.

9. Audi Teases Tesla Model X Fighter, Says Launch Planned For 2018

The e-tron quattro concept, shown in an Audi sketch, previews the brand's first mainstream EV model.

Audi has issued a teaser picture and some details of an all-electric SUV that it will launch to rival the upcoming Tesla Model X. The SUV will have a range of more than 500km (310 miles) and will go into production in 2018 as the brand's first volume electric car, Audi said in a statement.

Audi will preview the SUV, likely to be called the Q6, with the e-tron quattro concept that will debut at next month's Frankfurt auto show. The four-seat SUV has a length between that of the Q5 and the Q7, Audi said.

The SUV will be powered by three electric motors – one on the front axle and two on the rear axle - used on the electric variant of the R8 sports car, which has a 450km range. Audi did not give the details of the SUV's performance but reports in the motoring press said the model is expected to develop 500hp and 700Nm (517 lb-ft) of torque.

New battery technology and technical measures to reduce aerodynamic drag contribute to the EV's long range. The underbody is completely closed and it has movable aerodynamic elements at the front, on the sides and at the rear to improve the air flow around the car, helping the model to achieve a drag coefficient value of 0.25, a new record in the SUV segment, Audi said.
The large lithium ion battery is positioned between the axles and below the passenger compartment, creating a low center of gravity and a balanced axle load distribution.

The SUV will be underpinned by Audi parent Volkswagen Group's second-generation MLB platform that offers weight savings, helping to boost its range.

The Q6’s range exceeds the current range of Tesla's Model S, which can travel up to 435 km (270 miles) on a single charge. The Model X, Tesla's second model, is expected to have a range of 270 to 365 km (170 to 230 miles). Tesla is increasingly seen as a threat to larger luxury-car brands like Audi because of the allure of its vehicles.

10. EC Told To Consider Intermediate Transport Targets

The EU’s strategy on improving transport’s environmental impact needs realistic intermediate goals and, potentially, binding targets if it is to be successful, interested parties have told Brussels. The goals of the 2011 White Paper on Transport, which aims to cut greenhouse gas emissions from transport by 60% by 2050, should be more science-based to attract credible policy backing, according to the European Commission’s analysis of responses to a recent consultation on the strategy’s midterm review.

“Overall, the level of ambition is considered too high, the goals unrealistic, while the progress and coordination, in particular at Member States level, remain unsatisfactory,” the Commission said.

The paper set a number of goals, including banning cars running on conventional fuels in cities by 2050 while shifting 50% of road freight over 300km to rail or water and ensuring that aviation uses 40% low-carbon fuels. Respondents criticized the lack of a cost-benefit analysis in setting the targets. The plan also lacks a strategy to achieve the targets, respondents said. Around 80% of those who expressed their view on the cost of implementing the strategy said this was high or very high.

Future legislation should take a lifecycle approach while also considering the costs and impact on competitiveness, according to respondents.

The Commission is scheduled to publish a strategy paper on decarbonizing transport in the first half of 2016.

The responses also showed differences of views among transport sectors.

- The road sector called for equal treatment among sectors, improving the efficiency of transport instead of supporting modal shift. It would also like policy to support technological innovation rather than penalizing adverse environmental impacts.

- The rail industry, by contrast, supported the strategy’s modal shift goal and asked for more resources to increase investments, according to the analysis. It is in favor of a cost being put on adverse environmental impacts.

- The aviation sector saw over-regulation as a big problem, while the maritime sector wanted increased efforts to remove regulatory and technical burdens, particularly in short-sea shipping.
11. Climate Boss Says EU Can Only Back a Strong Paris Deal

The European Union will support a U.N. deal to cap global warming only if the agreement is legally binding and includes regular reviews to ensure words translate into deeds, Europe's climate boss said recently.

With just 10 days scheduled for formal negotiations before landmark talks begin in Paris on November 30th, preparations are painfully slow. Technical work to pare back an unwieldy negotiating text, still more than 80 pages long, is behind schedule and big economies, such as India and Saudi Arabia, have yet to deliver promises on emissions cuts.

European Climate and Energy Commissioner Miguel Arias Canete urged those governments and other "key G20 economies" to submit pledges to the United Nations without delay and said technical work must accelerate to keep pace with strong political will. Countering concerns the two biggest emitters, China and the United States, could dominate the Paris talks, he said the EU could not accept a deal "on the basis of a minimal level of common agreement". "It must be an ambitious agreement. I have established our priorities and we are going to fight for them,” he told a news conference in Brussels. "It will be an extremely difficult negotiation, but what I have seen is that there is political will."

Arias Canete laid out his priorities as:
- legal certainty,
- a review every five years,
- clear enforcement rules, and
- an interim 2050 goal of cutting global emissions by 60 percent versus 2010, plus
- the more remote target of virtually zero emissions by 2100.

While the EU and developing nations are among those urging an internationally binding text, others, such as the United States, want only national enforcement.

U.N. climate negotiations are haunted by the memory of a failed Copenhagen summit in 2009, the last attempt to reach a global climate deal. Arias Canete said the Paris talks had to be different and bring in nations representing at least 80 percent of all emissions, rather than a small club.

The EU was the first major economy to deliver its emissions pledge in March. It promised to cut emissions by at least 40 percent by 2030 versus 1990 levels. Arias Canete said that was the most ambitious yet, although the United States and China say they are taking huge steps.

So far the global pledges fall far short of the action needed to limit global warming to 2 degrees Celsius (3.6 degrees Fahrenheit) above pre-industrial times. The 2 degree limit, which the EU wants cemented into any Paris deal, is what scientists say can prevent the most devastating consequences of global warming.

12. UK May Use EU Small Print to Swerve Impact of Green Cuts

Britain is thinking of using an EU loophole to dodge the impact of its own subsidy cuts on renewable energy and escape fines for missing 2020 European renewable targets. Under EU rules Britain could use the loophole, termed statistical transfer, which would see it pay other, greener, EU countries overshooting their targets, to make up the difference. "We need to stay
open to the fullest possible range of options for meeting the 2020 target, including the use of statistical transfer," a spokeswoman for the Department of Energy and Climate Change said.

Britain’s new Energy and Climate Change Secretary Amber Rudd has announced changes to subsidies for biomass, solar and onshore wind projects to trim spiraling costs, which she said in June were likely to result in around 250 projects not being built.

Britain has an EU target to meet 15 percent of its energy needs from renewable sources by 2020 but with just five years to go it remain well short at just over 5 percent. Current contributions to the target from energy used in the transport and heat sectors are well off the pace of what is needed, placing more of a burden on the electricity sector to make up the shortfall. Analysis from consultants PWC showed Britain would need to generate more than 50 percent of its electricity from renewable sources by 2020 to meet the goal, up from around 20 percent in 2014.

"Technically the (EU) target could still be met if more renewable electricity capacity comes online but for that to happen the funding cap would need to be increased while the recent measures have all been to cap overspend," said Ronan O'Regan, director of renewables at PWC.

Latest data from the European Commission shows several countries, including the Netherlands and France, are also at risk of missing their targets, meaning there could be competition for the statistical transfers.

The 2020 renewable target is binding, which means that member states who do not comply are liable for infringement proceedings which can take many years.

It is unclear how much Britain would be fined but The EU’s highest courts in Luxembourg have the right to order payment of a fine for every day a country is found to be in breach of EU law. Richard Slark, Director at Poyry Management Consulting said it could end up being cheaper for Britain to not comply and face fines. "The fines for non-compliance are understood to be relatively small and they may not be levied for years, given the EU’s drawn out enforcement processes," he said.

13. EU Debate On Green Energy Targets Pitches UK against Germany

Britain and Germany will line up on opposite sides of a European Union green energy debate starting next month on how to meet agreed renewable energy targets for the next decade. The 28 member states agreed climate and energy goals last October, but to make it easier to get a deal, the decision went only as far as a framework.

In outline, the 2030 agreement includes cutting greenhouse gases by at least 40 percent versus 1990 and raising the share of renewable energy to at least 27 percent from 20 percent by 2020. The emissions target will be mandatory in the wider framework of U.N. climate goals to be reviewed in Paris at the end of the year.

So far, the 2030 renewable goal is binding only at EU-wide level and the challenge is to ensure it is met as the bloc as a whole cannot be fined for infringement.

Germany, which is pushing through its Energiewende, or shift from nuclear to green energy, wants binding laws. It has produced a position statement circulated over the summer weeks in Brussels referred to by diplomats as "the 'what if?' paper". "In the end, there has to be a consequence if the contributions do not add up to at least 27 percent. There is no point in pretending there won't
be any,” the German paper reportedly says. “The heads of states agreed on an EU binding target - not on an EU hoping target.”

Portugal also takes a firm line in another paper designed to influence diplomats. It says "a strong governance system" with "clear compliance mechanisms" is needed to attract investors. "Investors' confidence for clean energy will develop only on the back of a strong and reliable governance system," Imke Luebbeke, policy officer at campaign group WWF, said.

In the opposite camp, Britain, which is investing in new nuclear power and promoting shale gas exploration, aligned with the Czech Republic in a joint paper urging a "light-touch and non-legislative" approach. "It is each member state's right to determine their own most appropriate low-carbon energy mix. Renewable energy is one of a number of technologies that we can use to decarbonize our economy," a spokeswoman for Britain's Department of Energy and Climate Change said.

Luxembourg, holder of the EU presidency until the end of the year, says governance, as the formal implementation of the outline policy is known, is a priority.

After a preliminary meeting in July, closed-door technical talks begin in earnest in mid-September. One EU official, speaking on condition of anonymity, said progress will be difficult, but there are "points of agreement". "There has to be some system of national plans and cross-border sharing," the official said.

14. Research Recommends EU Ban on Ship Scrubber Discharge

EU countries should ban wastewater discharge generated by scrubbers to limit ships' environmental impact, a study for the German environmental protection agency UBA has recommended. Limiting the discharge generated by scrubbers is the best way to prevent potential damage, such as the release of pollutants, increased acidity and increased temperature and turbidity, the researchers said.

Adopting unilateral discharge restrictions would be easier within international maritime law than imposing prohibitions or design requirements for scrubbers. The study advocated a common EU approach because many safety requirements are inscribed in EU laws, including the Water Framework Directive and the Birds and Habitats Directives.

In the longer term, the researchers recommended regulating the discharge of scrubber effluents within the framework of the International Maritime Organization (IMO) to avoid putting EU ports at a competitive disadvantage.

The EU Sulphur Directive requires ships operating in the Baltic Sea, the North Sea and the English Channel to use marine fuel with a maximum sulphur content of 0.1% from January. Scrubbers, which clean sulphur from the ships’ exhaust, can be used as an alternative to switching to a cleaner, more expensive fuel.

“In principle, the use of clean liquid (diesel) and gas (LNG) fuels is preferable to an exhaust gas after treatment for the purpose of sulphur reduction,” the researchers said. German coastal waters are already under heavy pressure from shipping, and the contaminated wastewater “adds a further stress factor for marine organisms in the North Sea and Baltic Sea as well as the adjacent catchment areas supporting shipping traffic”, they argued.
Regulating the discharge of washwater would give the industry more flexibility in adjusting to the lower sulphur emission limits by allowing the use of the alternative technology while promoting more environmentally friendly scrubber types, the study argued.

Consultants to the European Commission earlier this summer pointed out that the Port Reception Facilities Directive does not yet cover waste discharged by scrubbers even though the Sulphur Directive assigns it the role to ensure that adequate facilities are in place to take the waste.

15. Brussels Sets EU-Wide Noise Map Rules

EU member states must use a common methodology for calculating noise exposure after 2018 under recently adopted rules. The European Commission has established a revised annex to the 2002 Environmental Noise Directive, setting out complex technical rules on how noise sources such as air traffic or various types of rail or road vehicles should be accounted for given factors such as the type of road surface.

Under the directive, member states must adopt action plans based on noise-mapping results to prevent and reduce environmental noise where necessary and preserve environmental noise quality where it is good.

The decision on the methodology entered into force last month after being adopted by the Commission in May. Development of the noise assessment methodology was led by the Joint Research Centre beginning in 2008.

The Commission is also developing another annex to the 2002 directive on calculating the burden of disease caused by exposure to specific noise levels. Around 125 million Europeans are exposed to noise above EU guidance levels, the European Environment Agency reported last December.

Responding to a parliamentary question from Italian MEP Aldo Patriciello (EPP) on the Commission’s proposed response to this finding, environment commissioner Karmenu Vella said in June that the Commission wanted to strengthen EU legislation on noise at source, as well as improving implementation of the Environmental Noise Directive. The Commission is evaluating the effectiveness and efficiency of the directive under its regulation fitness check program, Refit, Mr. Vella added.

NORTH AMERICA


Canada has finalized regulatory initiatives to align its standards on vehicle emissions of greenhouse gases and other pollutants with tougher standards in the U.S. by 2025. Canada will begin with the 2017 model year to toughen emissions standards for passenger cars, light-duty trucks and some heavy-duty trucks. By the 2025 model year, all such Canadian vehicles will meet the Tier 3 standards implemented by the U.S. Environmental Protection Agency, Environment Canada announced on July 29th.

“Maintaining alignment with U.S. fuel quality standards and air pollutant emission standards for vehicles and engines is consistent with the objectives of the Canada-U.S. Air Quality Agreement, the government of Canada's Clean Air Regulatory Agenda and the Canada-U.S. Regulatory Cooperation Council,” Environment Canada said.
When fully implemented, the standards are expected to reduce smog-forming air pollutant emissions from new vehicles by up to 80 percent from current levels, and lower fuel consumption by up to 50 percent compared to 2008 models.

The final amendments to the sulfur in gasoline regulations will reduce the average sulfur content of gasoline in Canada by nearly 70 percent, to 10 parts per million starting in 2017, from the current limit of 30 parts per million.

The regulatory changes are projected to lead to net benefits to the Canadian population totaling C$4.8 billion ($3.7 billion) for the 2015–2030 period, based on cumulative health and environmental benefits of C$7.5 billion ($5.8 billion) and cumulative fuel, vehicle and other costs of C$2.7 billion ($2.1 billion), Environment Canada said.

The department said that it made only a few minor changes from draft versions of the two sets of regulations that were published for public comment last fall. The amendments were modified to address concerns from vehicle manufacturers and importers over the need for a Canada-specific emission control information label for vehicles deemed “equivalent” to EPA-certified vehicles. The amendments to the sulfur in gasoline regulations were modified to require that sulfur content of imported gasoline be determined on a national basis rather than on a provincial basis.

Environment Canada rejected a range of other changes proposed in submissions filed during the comment period on the draft regulations, including:

- manufacturers and importers recommended easing the phase-in of stricter particulate matter and evaporative emissions standards to eliminate a potential barrier to introduction of Canada-unique vehicles;
- vehicle parts manufacturers suggested adoption of a more stringent particulate matter standard proposed by the California Air Resources Board; and
- the fuel industry requested that all gasoline imported from the U.S. and subject to the EPA Tier 3 standards be deemed compliant with the new Canadian rules to avoid potential gasoline shortages.

17. U.S. Appeals Court Upholds Bulk Of Obama Air Pollution Rule

A U.S. appeals court mostly upheld a major federal environmental regulation requiring some states to limit pollution that contributes to unhealthy air in neighboring states. The U.S. Court of appeals for the District of Columbia Circuit rejected several broad challenges to the regulation. But in a partial loss for the government, the court said the U.S. Environmental Protection Agency will have to reconsider the 2014 emissions budgets it set for various states for sulfur dioxide and nitrogen oxide emissions.

The court said the rule could remain intact while the government revises the emissions budgets.

Among the challengers were coal company Peabody Energy Corp and energy company American Electric Power Company Inc.

The case was before the appeals court for a second time after an April 2014 U.S. Supreme Court decision in which the justices, on a 6-2 vote, upheld the regulation.
Writing for the majority, Justice Ruth Bader Ginsburg called the EPA rule a cost-effective way to allocate responsibility for emission reductions among upwind states, and that the EPA need not consider each state's proportionate responsibility for the emissions in question.

The appeals court had previously thrown out the rule in an August 2012 decision, prompting the Obama administration to seek high court review.

The second round of litigation was on separate challenges to the regulation.

18. North American Panel Issues Five-Year Climate Plan

A new five-year strategic plan that focuses on climate change mitigation and adaptation, green growth and sustainable communities and ecosystems was released in Boston on July 15th by U.S. Environmental Protection Agency Administrator Gina McCarthy and her counterparts from Canada and Mexico. McCarthy, Canada’s Minister for the Environment Leona Aglukkaq and Mexico’s Secretary for the Environment Rodolfo Lacy Tamayo said the 2015–2020 strategic plan represents a renewed commitment on the part of the three nations to conserve, protect and enhance the North American environment by providing resources, expertise and direction through the Commission for Environmental Cooperation (CEC) during the next five years.

The CEC is an international organization the U.S., Canada, and Mexico established under the North American Agreement on Environmental Cooperation.

The seeds of the 2015-2020 plan were established during the commission's 2014 meeting in Canada. Among the priorities highlighted in the plan are the development of guidelines for designing marine protected area networks, improving the comparability of data related to climate change, enhancing enforcement of laws related to management of electronic waste and other materials and working with the private sector to improve environmental performance.

The report also calls for efforts to focus on improving conditions in vulnerable communities by sharing and improving access to information, such as expanding an air monitoring system used in Canada and the U.S. to Mexico.

Each of the strategic priorities the ministers approved featured a series of proposed goals to be attained during the next five years. The goals include steps such as developing, comparing and implementing greenhouse gas emissions mitigation actions consistent with international commitments and piloting protocols to reduce emissions of short-lived climate pollutants such as black carbon and methane in key sectors such as waste management, the food industry and transportation.

The environmental leaders also said they discussed the possibility of using the CEC as a vehicle for regional cooperation to address the nexus between climate change and other issues such as water quality and quantity, renewable energy, energy efficiency and oceans.

“We are going to be enormously productive working together,” McCarthy said after the three environmental leaders had signed the 2015 Ministerial Statement in which they committed to implementation of the CEC five-year plan. The three said in their statement the plan is focused on “producing tangible outcomes and measurable results to deliver on our strategic vision.”
The CEC leaders said the priorities established in the plan also reflect the commission's commitment to involve local and indigenous communities in making environmental management decisions.

Also at the Boston meeting, the CEC announced the selection of 15 individuals with traditional ecological knowledge who will serve as advisors to the CEC's Joint Public Advisory Committee. “These traditional knowledge experts from across North America will provide invaluable input into the work of the CEC,” Canada's Aglukkaq said in announcing the appointments. “When considered along science, traditional knowledge contributes to improved understanding of ecological processes and ultimately better results for the environment.”

The next meeting of the CEC will be held in 2016 in Mexico.

19. Ships in Port of Vancouver to Get Electrical Hookup

Shore-based electrical power for container vessels in the port of Vancouver, set to be in place in 2017, will reduce the number of ships leaving engines running and help the city's environment, officials said. “The program will lead to decreased greenhouse gas emissions, improved overall air quality and reduce noise,” Minister of National Revenue Kerry-Lynne Findlay said on July 22.

The C$12 million ($9.23 million) in funding announced this week will allow for electrical upgrades by provincial power utility BC Hydro at Global Container Terminals' Deltaport terminals and DP World Vancouver's Centerm terminal, Findlay said.

Transport Canada's Shore Power Technology for Ports Program will provide half the funding, with Port Metro Vancouver providing the rest.

The system is expected to be operational by March 31, 2017.

Cruise ships in Vancouver already have access to electrical shore power, and since 2009 more than 11,000 metric tons of greenhouse gas emissions have been avoided by cruise ships using shore power, Findlay said.

Adding electrical shore power for container vessels will help Port Metro Vancouver reach targets under the Northwest Ports Clean Air Strategy, a collaboration among Vancouver and the U.S. cities of Tacoma and Seattle that aims to cut emissions in the shared Puget Sound-Georgia Basin air shed.

Vancouver is Canada's busiest port, trading $187 billion in goods in 2014, according to port statistics.

20. Tensions Over U.S. Electric Vehicle and High Efficiency Mandates Spill Into Open

A long-simmering dispute between automakers and U.S. regulators over policies to promote electric vehicles and high fuel efficiency spilled into the open recently, in the high stakes struggle over the future of automotive technology. The heads of two major lobby groups told hundreds of attendees at an industry conference in Traverse City, Michigan, that automakers are struggling to meet a California mandate to boost demand for electric cars to 15 percent of sales by 2025.

Nine other states have adopted the same target to comply with the Obama administration’s efforts to curb greenhouse gas emissions from vehicles.
The rules should be made tougher, insisted Diarmuid O'Connell, vice president of business development at Tesla Motors Inc., the Silicon Valley electric carmaker which profits from selling clean air credits generated by its Model S sedans. In the unusually open discussion, O'Connell said consumer demand for electric cars could be higher, but too many models from established car companies "are appliances in terms of the concept and the way that they look."

A top official of California's clean air regulatory agency said state officials will stand firm, and got support from the head of the U.S. Environmental Protection Agency's Office of Transportation and Air Quality. "I am a big believer in the idea of California as an incubator for technology," said Christopher Grundler of the EPA.

Under the federal rules, automakers and regulators are supposed to conduct a review of U.S. fuel economy standards that call for new vehicles to average 54.5 miles per gallon by 2025.

California and nine other states, however, have taken the additional step of setting quotas for sales of "zero emission vehicles," either battery electric or fuel-cell models, which account for less than 1 percent of U.S. car and light truck sales today.

The recent boom in sales of sport-utility vehicles and light trucks, fueled by cheap gasoline, has exacerbated industry concerns about the electric vehicle mandates, said Mitch Bainwol, president of the Alliance of Automobile Manufacturers, which represents the Detroit Three and several other large Asian and European automakers. "The product mix is drifting away" from the targets of the federal greenhouse gas emissions rules and the California electric vehicle targets, Bainwol said.

Forrest McConnell, former chairman of the National Automobile Dealers Association, told attendees the mandates were comparable to offering broccoli to consumers who wanted low-calorie doughnuts.

But mainstream auto industry officials were unclear about how they would alter the California and federal regulatory systems. John Bozzella, head of Global Automakers, a trade group that represents mostly non-U.S. automakers, suggested the answer could be an entirely new approach that gives automakers incentives to adopt advanced safety and connected vehicle technology, which allows cars to communicate with each other and help cut down greenhouse gas emissions, perhaps by reducing fuel burn sitting in traffic jams. But the EPA's Grundler was skeptical. "We believe automakers will have a formidable task" to show that connected vehicle technologies will produce greenhouse gas benefits, he said.

Tesla Motors Inc. is pushing for tougher regulations. At the conference, representatives of the Palo Alto electric auto maker said that California will fall far short of an executive order by Gov. Jerry Brown to have 1.5 million electric vehicles on the road by 2025, and that federal fuel economy targets should be higher.

Tesla estimates that manufacturers need to sell only 600,000 zero emission vehicles in California by 2025 based on the current rules, well below Brown's goal, because of the arcane way the state regulation is written. They will use banked environmental credits to satisfy the rules, reducing the number of vehicles they are obligated to sell.

Tesla has used emissions regulations to its financial advantage. Since 2008, the company has earned more than $534 million from the sale of environmental credits to competitors that don't sell
enough zero emission vehicles to meet California's rigorous standards — the strictest in the nation. The total also includes sales of federal greenhouse gas credits.

O’Connell said that although selling credits has been a boon to the company, it isn't a goal in itself. "The amount of revenue that we generate from credits has become less strategic over time," he said. In the first quarter of this year, Tesla earned $66 million from credit sales, an amount equal to 7% of its $940 million in revenue during the period. Instead, he said, Tesla's goal is to create a mass market for electric vehicles, "where 100% of the transportation in the U.S. and the world is electric."

Tesla’s posture at the conference followed its objection this year to a proposal made to the California Air Resources Board by a group of mid-size automakers, including Mazda, Subaru and Volvo. The car companies asked the board to alter the rules so that they could satisfy their requirements with sales of plug-in hybrids rather than battery-electric and fuel-cell vehicles.

Tesla argued at the time that the state's zero emission vehicle standards must remain strict. "With more than 16 million combustion engine vehicles delivered in the United States every year, it is critical that the ZEV standards remain strong and that all automakers are motivated to achieve California’s emissions reduction goals," James Chen, Tesla’s vice president of regulatory affairs, wrote to the panel in May.

The board sided mostly with the automakers, delaying the requirements to sell zero emission vehicles to 2026 but ordering them to put more plug-in hybrids on the road to comply in the meantime.

California established its Zero Emission Vehicle regulation in 1990 as part of a program to slash air pollution in the state. It allows automakers to generate and bank credits to meet future goals by selling cars with transitional and zero emission technology. Tesla’s Model S, which can travel up to 270 miles on one charge, earns four credits, and Toyota's Prius plug-in hybrid, which can go only 11 miles in electric mode before the gas engine kicks in, earns one. Some traditional vehicles, such as the low-polluting Subaru Impreza, earn just two-tenths of a credit.

But so far, U.S. consumers have been slow to adopt alternative fuel technologies, despite those standards and a steadily improving array of low-emission vehicles to choose from. An analysis by industry research firm WardsAuto found that hybrids, plug-in hybrids and electric vehicles accounted for just 3.6% of U.S. auto sales last year.

"While consumers have more choices than ever in energy-efficient automobiles, if they don't buy them in large volumes, we fall short," Bainwol wrote in a recent report. O'Connell argued that most automakers haven't succeeded with electric cars because they build only "compliance cars" — vehicles that meet California's requirements but fail to trigger consumer emotion.

A study by the Natural Resources Defense Council supports Tesla's conclusion that Gov. Brown's executive order will not be met. But that study is not as pessimistic; it found that at current sales levels there will be nearly 1.3 million plug-in hybrid and zero emission vehicles on California roads by 2025. In part, that's because the auto industry has over the years banked at least 168,000 credits by selling a variety of technologies, including electric golf-cart type vehicles, some low emission gasoline cars as well as electric cars and plug-in hybrids, the council said. Still, Tesla has created a brisk market in credits, selling to automakers that either don't produce electric cars or have made a strategic decision to buy credits and cap their own sales of such vehicles.
The California Air Resources Board has already launched a review of the program, looking at its effectiveness at reducing carbon emissions in the state.

Simon Mui, director of California vehicles and fuels for the Natural Resources Defense Council, said the regulation clearly needs fixes. "If the state is going to meet the spirit of the law and not just the letter, the program will need to be strengthened and these holes filled," Mui said. "We need to figure out how to drain the credit bank accounts."

Tesla is also bucking the industry on another major issue — federal fuel economy standards. Falling oil prices have created a surge in sales of trucks, sport-utility vehicles and crossovers, which made up 54% of U.S. auto sales during the first half of this year, up from 51% a year earlier, according to industry data. But Tesla doesn't see a problem with the federal target of 54.5 mpg by 2025. That efficiency goal, measured by special Environmental Protection Agency tests, equals a real-life fuel economy of about 37 mpg. O'Connell said those standards could "easily" be achieved.

A May analysis by the Union of Concerned Scientists found that the auto industry has made significant strides toward increasing fuel efficiency and is ahead of schedule in meeting the federal fuel economy goals. Already, 100 models making up 10% of new passenger cars and trucks on the market today meet the federal targets for 2020, the scientists group said.

21. U.S. EPA Proposes Rules to Curb Methane Emissions from Oil and Gas Sector

The U.S. Environmental Protection Agency proposed regulations aimed at cutting methane emissions from the oil and gas sector by up to 45 percent over the next decade from 2012 levels. The regulations on methane are one part of the Obama administration's strategy to curb greenhouse gases and combat climate change and come just two weeks after the president unveiled a sweeping rule to slash carbon emissions from the country's power plants.

The rules are intended to put the United States on course to meet its pledge to the United Nations climate change talks to cut its greenhouse gas emissions 26-28 percent below 2005 levels by 2025. EPA Administrator Gina McCarthy said in January that methane emissions are projected to rise by more than 25 percent by 2025 even though the industry has decreased methane emissions 16 percent since 1990.

The U.S. boom in natural gas and oil production has raised concerns about leaks and venting of methane throughout the production process - from wells to transmission. So far, programs aimed at preventing those leaks have been voluntary.

Methane is the main component of natural gas, but when it is released into the atmosphere, it becomes a potent greenhouse gas.

"The challenge is very large, but the opportunity to make a difference is equally large," said Mark Brownstein, a vice president of climate and energy at the Environmental Defense Fund. He added, however, that 99 percent of industry has failed to participate in voluntary programs.

Industry groups have said that oil and gas companies have already made great strides in expanding production while keeping methane emissions in check. They say requiring companies to buy that extra equipment is costly, especially as oil prices drop, and particularly for smaller producers. The American Petroleum Institute said last month that methane emissions from natural gas production was down 11 percent since 2005.
But advocates for stricter methane rules have said capturing methane is mutually beneficial for oil and gas companies, and would save them money in the long run. Detecting those leaks and capturing the methane with technology that is currently on the market can save companies money and help them produce oil and gas more efficiently, they say.

Companies can invest in more efficient compressors and seals, infrared cameras to detect leaking methane, which is invisible to the human eye, and pneumatic controllers to control valves throughout the oil and gas production system, which are all measures the EPA has been studying.

Experts following the rulemaking process said a methane regulation that entered force in Colorado last year may offer clues as to what a federal rule could look like. Three major oil and gas producers, Anadarko, Encana and Noble Energy, worked with Democratic Governor John Hickenlooper’s staff and environmental groups led by the Environmental Defense Fund to craft the rule. The rule requires companies to inspect for methane leaks in tanks, pipelines and wells once a month at large facilities and plug them using infrared cameras. The rule applies emissions limits on different equipment.

### 22. President Obama Announces Carbon Pollution Standards for Power Plants

President Obama and Environmental Protection Agency (EPA) Administrator Gina McCarthy have released the final Clean Power Plan, a historic step in the Obama Administration’s fight against climate change. The Clean Power Plan establishes the first-ever national standards to limit carbon pollution from power plants. The final Plan sets flexible and achievable standards to reduce carbon dioxide emissions by 32 percent from 2005 levels by 2030, 9 percent more ambitious than the proposal. By setting carbon pollution reduction goals for power plants and enabling states to develop tailored implementation plans to meet those goals, the Clean Power Plan is a framework that will:

- Provide significant public health benefits – The Clean Power Plan will avoid up to 3,600 premature deaths, lead to 90,000 fewer asthma attacks in children, and prevent 300,000 missed work and school days.
- Create tens of thousands of jobs while ensuring grid reliability;
- Drive more aggressive investment in clean energy technologies than the proposed rule, resulting in 30 percent more renewable energy generation in 2030 and continuing to lower the costs of renewable energy.
- Save the average American family nearly $85 on their annual energy bill in 2030, reducing enough energy to power 30 million homes, and save consumers a total of $155 billion from 2020-2030;
- Give a head start to wind and solar deployment and prioritize the deployment of energy efficiency improvements in low-income communities that need it most early in the program through a Clean Energy Incentive Program; and
- Continue American leadership on climate change by keeping us on track to meet the economy-wide emissions targets we have set, including the goal of reducing emissions to 17 percent below 2005 levels by 2020 and to 26-28 percent below 2005 levels by 2025.

The final Clean Power Plan takes into account the input EPA received through extensive outreach, including the 4 million comments that were submitted to the agency during the public comment period. The result is a program that ensures the U.S. will stay on a path of long-term
clean energy investments that will maintain the reliability of our electric grid, promote affordable and clean energy for all Americans, and continue United States leadership on climate action.

23. Fifteen U.S. States Immediately Seek To Block EPA Carbon Rule

Fifteen state attorneys general petitioned a federal court in Washington to block new U.S. rules to curb carbon emissions from power plants, in the first of several expected legal challenges to the Obama administration measure. States that oppose the Environmental Protection Agency's Clean Power Plan filed for the stay in the U.S. Court of Appeals for the D.C. Circuit. The states asked for a ruling by Sept. 8, one year before they need to submit compliance plans to the EPA.

"This rule is the most far-reaching energy regulation in the nation's history, and the EPA simply does not have the legal authority to carry it out," West Virginia Attorney General Patrick Morrisey said. "The Clean Air Act was never intended to be used to create this type of regulatory regime, and it flies in the face of the powers granted to states under the U.S. Constitution," said Morrisey.

Alabama, Arkansas, Florida, Indiana, Kansas, Kentucky, Louisiana, Michigan, Nebraska, Ohio, Oklahoma, South Dakota, Wisconsin and Wyoming joined West Virginia in requesting the stay.

The EPA said the Clean Power Plan would withstand legal challenges because it was based on a "sound legal and technical foundation." "To ensure that the Clean Power Plan's significant health benefits and progress against climate change are delivered to all Americans, EPA and the Department of Justice will vigorously defend it in court," EPA spokeswoman Liz Purchia said.

Attorneys general for 15 other states, including New York, California, Illinois and Oregon, along with New York City and the District of Columbia, issued a statement supporting the EPA rules and saying they would oppose legal efforts to block their implementation.

24. Clinton Parts With Obama Administration on Arctic Drilling

Democratic presidential candidate Hillary Clinton has staked out her opposition to Arctic oil exploration, putting her at odds with the Obama administration one day after it approved drilling off Alaska. "The Arctic is a unique treasure," Clinton said in a Twitter post. "Given what we know, it's not worth the risk of drilling."

One day earlier, the Obama administration gave Royal Dutch Shell PLC final approval to resume drilling into the oil zone off northern Alaska for the first time since 2012. That decision drew widespread condemnation from environmentalists, although some experts said President Barack Obama had little power to stop Shell from exploring because it had obtained leases during the administration of former Republican President George W. Bush.

Clinton's comment marks one of her most significant breaks with fellow Democrat Obama on a major environmental issue, and appears to be part of a recent effort to appease greens within the party whose enthusiasm and support she will need to secure the nomination.

Clinton has also praised the administration's clean power plant rules as "visionary" but has yet to unveil a comprehensive climate platform.

Clinton said if she becomes president, she would seek to phase out fossil fuel extraction and increase fees on companies operating on public lands in a way that does not disrupt the economy.
But she has been careful not to comment on whether she would approve the Keystone XL oil pipeline from Canada ahead of an expected ruling by the Obama administration.

Clinton’s liberal challenger, U.S. Senator Bernie Sanders of Vermont, a socialist, vociferously opposes the pipeline. In May, Sanders was among a group of senators who sent the administration a letter opposing Arctic drilling.

Environmentalists oppose Arctic drilling, saying any spill would harm walruses, whales, and polar bears in a region scientists say is already vulnerable to climate change.

The Arctic contains 20 percent of the world’s undiscovered oil and gas, the U.S. government estimates, making it a coveted resource. Shell suffered a series of mishaps in 2012 in the Arctic, including losing control of an oil rig from which Coast Guard divers dropped from helicopters had to rescue 18 crew members. But the company says Arctic oil, which would not be produced for at least a decade, is needed to meet growing global demand.

The Obama administration’s approval of drilling for oil in the Arctic Ocean clashes with the message President Barack Obama will deliver when he visits Alaska to emphasize the dangers of climate change, some environmental groups say. As much as the groups praise Obama for his overall body of work — from stricter fuel-efficiency standards to regulations aimed at reducing greenhouse gas emissions from power plants — they consider the approval of exploratory drilling in the Arctic a stain on his environmental legacy that will send a mixed message to other countries about the seriousness of confronting global warming.

The burning of fossil fuels causes more greenhouse gases to build up in the atmosphere. Some groups would prefer leaving the oil in the ground and not tempting the harsh environmental conditions that could hinder the response to any potential spill. "It sends a terrible signal to the rest of the world for the United States to be using public resources to promote that development," said Niel Lawrence of the Natural Resources Defense Council. "We have to make clear to the rest of the world that we are all in on a clean energy future. And we’ve got to stop giving the rest of the world license to go exploring by permitting Shell to do it."

The administration previously allowed Royal Dutch Shell to begin drilling only the top sections of two wells in the Chukchi Sea because key equipment, called a capping stack, was stuck on a vessel that needed repair in Portland, Oregon. Now, Shell is free to drill into oil-bearing rock, estimated at 8,000 feet below the ocean floor.

The U.S. Geological Survey estimates that U.S. Arctic waters hold 26 billion barrels of recoverable oil. Shell is eager to explore in a basin that company officials say could be a "game changer" for domestic production.

Obama, who is scheduled to visit Alaska later this month, says he is mindful of the dangers of offshore drilling, particularly given the 2010 Deepwater Horizon oil spill. "When it can be done safely and appropriately, U.S. production of oil and natural gas is important," he said at a news conference earlier this year. "I would rather us, with all the safeguards and standards that we have, be producing our oil and gas, rather than importing it, which is bad for our people, but is also potentially purchased from places that have much lower environmental standards than we do."

When asked whether the administration was sending contradictory messages, White House spokesman Frank Benenati said the administration has invested heavily in renewable energy so
that the nation can transition off fossil fuels. "But it's also true that we cannot make that transition
overnight, which is why we have taken steps to ensure safe and responsible development of our
domestic energy resources that benefits our economy and enhances global energy security, with
safety remaining paramount," Benenati said.

25. Green Energy Sees Secure Future from Obama's Climate Plan

Solar and wind energy in the United States is likely to have a secure future thanks to President
Barack Obama's plan to cut carbon emissions by forcing utilities to use renewable sources to
produce electricity, the industry said. With its 2030 deadline, Obama's Clean Power Plan offers a
degree of stability over the next 15 years to renewable energy companies which have historically
relied on more precarious state and federal subsidies to drive growth.

"The manufacturers will keep investing if we can look forward and say over the next five-plus
years we're going to see continued demand for this product," said Mike Garland, chief executive
of Pattern Energy Group Inc., which owns 16 wind farms in the United States, Canada and Chile.

Renewable energy sources like wind and solar depend heavily on government support such as
procurement mandates and tax subsidies. The wind industry, in particular, has experienced sharp
swings in demand over the last decade due to a tax credit that has been renewed in sometimes
yearly increments. That lack of clarity has spooked some makers of wind turbine components
from making long-term commitments to the U.S. market.

Not all uncertainty has vanished. Obama's plan faced sharp criticism from Republican presidential
candidates vowing to revoke the regulation. And the plan is sure to be challenged in court (see
above), with a slew of lawsuits expected from industry and coal-dependent states that are likely
to be resolved only at the Supreme Court.

That legal and political ambiguity may account for the collective shrug investors delivered to the
announcement. The MAC Global Solar Energy index fell 3 percent on Monday. "It's just too long
term right now," said Shawn Kravetz, president of Boston-based Esplanade Capital, which has a
fund focused on the solar industry. "The people who are moving these stocks I assure you can
barely focus on Aug. 18, never mind 2018."

But many companies say they believe the new regulation will guarantee their place as an essential
part of the U.S. energy mix. Though states have until 2022 to begin complying, renewable energy
and efficiency companies say they expect investments in the transition to accelerate immediately.

"For a publicly traded company that's fast growing, 2022 is a lifetime from now," said Alex Laskey,
president of Opower Inc., a provider of software that helps utilities reduce their energy
consumption. "But the shift has to begin now."

The solar industry, which is bracing for its key federal tax credit to be slashed to 10 percent from
30 percent in 2017, could use the need to meet the higher renewables threshold to convince
legislators to make the initial cut less drastic, one executive said.

"It gives new hope to a different approach," said Tom Werner, chief executive officer of U.S. solar
company SunPower Corp. "Abrupt change is rarely good for industry."

The Investment Tax Credit, which has been in place since 2006, has allowed solar to become
cost-competitive with fossil fuels in about a third of the U.S. states, Werner said.
Yet while the industry has always craved regulatory certainty, renewable energy supporters say that the transition away from coal to cleaner fuels is already underway - and cannot be derailed by politics.

"Those who are positive on renewables see this happening regardless of what a politician might say at any given point in time," said Tony Tursich, who manages about $450 million for Trillium Asset Management. "Renewable energy is going to continue to grow despite who gets elected president in the United States in 2016."

26. Pope’s Climate Push At Odds With U.S. Catholic Oil Investments

Pope Francis heartened environmentalists around the world in June when he urged immediate action to save the planet from the effects of climate change, declaring that the use of "highly polluting fossil fuels needs to be progressively replaced without delay." But some of the largest American Catholic organizations have millions of dollars invested in energy companies, from hydraulic fracturing firms to oil sands producers, according to their own disclosures, through many portfolios intended to fund church operations and pay clergy salaries.

This discrepancy between the church's leadership and its financial activities in the United States has prompted at least one significant review of investments. The Archdiocese of Chicago, America's third largest by Catholic population, told reporters that it will reexamine its more than $100 million worth of fossil fuel investments. "We are beginning to evaluate the implications of the encyclical across multiple areas, including investments and also including areas such as energy usage and building materials," Betsy Bohlen, chief operating officer for the Archdiocese, said in an email.

The pope's encyclical, a letter sent to all Catholic bishops, has sharpened a debate well underway in Catholic organizations and other churches about divestment. But many major American dioceses have resisted the push. Dioceses covering Boston, Rockville Centre on Long Island, Baltimore, Toledo, and much of Minnesota have all reported millions of dollars in holdings in oil and gas stocks in recent years. The holdings tend to make up between 5 and 10 percent of the dioceses' overall equities investments, similar to the 7.1 percent weighting of energy companies on the S&P 500 index, according to the documents.

The United States Conference of Catholic Bishops' guidelines on ethical investing warn Catholics and Catholic institutions against investing in companies related to abortion, contraception, pornography, tobacco, and war, but do not suggest avoiding energy stocks.

The tussle over fossil fuel investments has already hit the endowments of major Catholic universities. Last year, the Marianist University of Dayton said it would begin divesting its holding in fossil fuel companies. And in June, Georgetown, a Catholic university in Washington, D.C., said it would no longer directly invest in coal companies, handing a partial victory to a student-led campaign for complete fossil fuel divestment.

U.S. schools that have resisted activist calls for divestment in fossil fuels have argued that their responsibility to ensure strong returns to fund their operations trumps any social benefits that might be gleaned from selling off coal, oil and gas stocks

27. What Cities Have Most Electric Cars In The U.S.?
In the U.S., government entities on the Federal, state, and local levels are pushing for greater electric-car adoption in different ways. While different regions in the country are working towards the same goal, the policies enacted to reach it—and the degree to which they’re implemented—can vary significantly. Consequently, the distribution of electric cars throughout U.S. metropolitan areas is somewhat uneven.

After more than four years of modern electric-car sales, it's clear that some areas are more favorable for plug-ins than others. Whether it's local incentives, available charging infrastructure, or just a cultural climate more attuned to green-car ownership, some parts of the U.S. have embraced electric cars more than others.

Every year, network operator ChargePoint compiles a list of the top 10 U.S. cities for electric cars, based on the number of vehicles registered and available charging stations. The company only counts stations on its own network, though, and accounts for population differences when comparing the number of car registrations. Perhaps not surprisingly, one area in California led the way this year, although the Golden State didn't completely dominate the rankings. That region was the San Francisco Bay Area—which encompasses Oakland and San Jose, as well as the city of San Francisco itself.

While Los Angeles had a higher overall total of registered electric cars at 57,000, ChargePoint said San Francisco's total of 48,000 represented a greater percentage when compared to its population. This is San Francisco's second year in a row as the top electric-car city; Los Angeles moved up from sixth to second place. Seattle was bumped down from second to third, directly ahead of San Diego and Honolulu.

They were followed by Austin, Detroit, Atlanta, Denver, and Portland, Oregon.

Atlanta and Denver are new to the top 10 list this year, while Washington, D.C. and Boston--ranked ninth and tenth last year, respectively--fell out of the top 10.

With strong local government support and an established charging infrastructure, the West Coast will likely continue to be the most electric-car-friendly region of the country for the time being. Yet if more cities undertake similar efforts to promote electric cars, this list could become a little more diverse in the years to come.
Researchers from the International Council on Clean Transportation (ICCT) attempted to assess the effectiveness of policies in a new white paper. It tracks which U.S. cities have the most electric cars, and seeks to draw conclusions about why those cities have been more effective in promoting adoption than others. Total plug-in electric car sales from the 25 cities studied accounted for 1.1 percent of new-vehicle sales in 2014, according to researchers.

The cities chosen were determined to be the 25 most populous metropolitan areas in the U.S. They also represent 67 percent of new electric-car registrations, and 53 percent of charging infrastructure, as of 2014.

The seven cities with the highest per capita electric-car sales in 2014 were: San Francisco, Atlanta, Los Angeles, San Diego, Seattle, Portland, and Riverside (California). These cities each had two to seven times the national average of electric cars in their jurisdictions.

The preponderance of West Coast cities perhaps isn't surprising, considering the aggressiveness with which California, Washington, and Oregon promote electric cars.

All of the top cities were found to be engaging in multiple activities to promote electric cars—from investing in charging infrastructure and granting cash incentives, to giving drivers perks like solo carpool-lane access. This in turn leads to carmakers targeting these areas for greater electric-car sales. In the case of California, a zero-emission vehicle mandate means certain manufacturers are obligated to build cars specifically for sale in the state, giving Californians a greater choice of models.

![Electric-car registrations and promotion actions in U.S. cities in 2014.](image.png)
Researchers noted that while each city tailors policies to its specific needs, an outline of best practices is beginning to emerge. Specifically, the "ecosystem approach" of involving a wide variety of groups--including governments, private companies, and not-for-profits--is one of the most effective ways to promote electric cars.

Cities tend to be a good environment for these diverse stakeholders to interact, researchers noted. They're also the ideal environment for most electric cars on sale today. Short average trip distances, lots of stop-and-go traffic, and plenty of parking spaces that can house charging stations ensure cars' relatively short ranges aren't taxed.

However, as more longer-range electric cars appear--and efforts to grow the segment continue--advocates may have to look beyond metropolitan areas.

28. CARB Releases Draft Technology Assessment for Commercial Harbor Craft

The California Air Resources Board (ARB/Board) announces the release of the draft document “Technology Assessment: Commercial Harbor Craft”.

This draft technology assessment was developed and written by South Coast Air Quality Management District (SCAQMD) in conjunction with ARB. This assessment examines technologies projected for development over the next five to ten years that can be applied to commercial harbor craft to reduce fuel consumption, greenhouse gases (GHG) and criteria pollutant emissions (e.g. nitrogen oxides and particulate matter). Such technologies support ARB’s long term objective of transforming the on- and off-road mobile source fleet into one utilizing zero and near-zero emission technologies to meet air quality and climate change goals.

Sources of information used in the draft assessment include an extensive list of published reports, research papers, and documented conversations with technology experts. The draft assessment discusses each technology by providing a basic description, the current state of development or commercial readiness, economics, potential emission reductions, advantages, and key performance parameter issues and deployment challenges.

29. U.S. Driving Hits Historic High in Year's First Half

New estimates released by the U.S. Department of Transportation’s (USDOT) Federal Highway Administration (FHWA) show that U.S. driving topped 1.54 trillion miles in the first half of 2015, beating the previous record – 1.5 trillion, set in June 2007. This is more than double the amount driven during the same period in 1981, continuing a trend of America’s driving mileage doubling nearly every generation.

The new data, published in FHWA’s latest “Traffic Volume Trends” report, a monthly estimate of U.S. road travel, show that 275.13 billion miles were driven last June, the most ever in June of any year and the highest VMT for the first half of any year – reaffirming calls for increased investment in transportation infrastructure as demand on the nation’s highway system grows.

According to FHWA’s Traffic Volume Trends report, the nation’s driving has increased for 16 months in a row.

The June 2015 report also includes seasonally-adjusted data, which enable VMT comparisons with May or any other month in any year, from the USDOT’s Bureau of Transportation Statistics. Analysis of seasonally-adjusted VMT is an alternative to analysis of unadjusted VMT, which
traditionally uses comparisons of a month to the same month in previous years to determine trends.

The seasonally-adjusted vehicle miles traveled for June 2015 were 261.9 billion miles, a 3.4 percent increase – or 8.7 billion more VMT – compared to the previous June and a .1 percent decrease – or 2 million more miles traveled – compared with May 2015. The estimates include passenger vehicle, bus and truck travel.

At 63.1 billion unadjusted VMT, traffic in the North Central – 12 states including North Dakota, Ohio and Missouri – was the nation’s most-traveled region for the month representing the seventh consecutive month of VMT growth. The Northeast, a region of nine states stretching from Pennsylvania to Maine, showed the smallest growth – rising only 1.1 percent, or 38.8 billion VMT, compared to the same month a year earlier.

At 10.8 percent, Hawaii led the nation with the largest unadjusted single-state traffic percent increase compared to the same month a year earlier, followed by Colorado at 7.8 percent and Montana at 7.5 percent.

The new figures confirm the trends identified in "Beyond Traffic," a USDOT report issued earlier this year, which projects a 43 percent increase in commercial truck shipments and population growth of 70 million by 2045. The report examines the trends and choices facing America’s transportation infrastructure over the next three decades, including a rapidly growing population, increasing freight volume, demographic shifts in rural and urban areas, and a transportation system that is facing more frequent extreme weather events. Increased gridlock nationwide can be expected unless changes are made in the near-term.

**ASIA-PACIFIC**

**30. Former Top China Environmental Official Investigated**

A former top Chinese environmental official is being investigated for alleged bribery in connection with the handling of environmental impact assessments, the government said July 31. Former vice minister of the Ministry of Environmental Protection Zhang Lijun is the highest ranking environmental official to come under investigation in an anti-corruption drive started when President Xi Jinping assumed office in 2013.

The investigation follows a June announcement that more 2,000 officials are being investigated for alleged environmental protection infractions. The countrywide crackdown comes in the wake of China’s efforts to curb pollution.

China’s Central Commission for Discipline Inspection (CCDI) said in a July 30 statement that Zhang, who served as vice minister of the MEP from March 2008 to February 2013, was under investigation for “suspected serious violations of the law”—the standard statement the agency issues to indicate when an official will likely be charged in an anti-corruption probe.

Zhang held environmental policy positions since he was named director and party secretary of the Jilin provincial environmental protection bureau in 1989. He joined the State Environmental Protection Administration in 1998, which became the Ministry of Environmental Protection in 2007. He served in a high-level post from 2008 to 2013, when he retired, according to the South China Morning Post.
Zhang is one of eight retired provincial or ministerial-level officials to be investigated by CCDI, which also has investigated 17 provincial and ministerial-level officials still in office, according to a July 31 report from state-run Xinhua news agency.

The same report indicated that at the time the CCDI was investigating improper handling of environmental impact assessment approvals and bribery cases related to those assessments among MEP officials, a letter exposing Zhang’s possible connection to these issues was sent to the investigation body by an environmental reporter in Guangdong province. The CCDI originally made a statement regarding the investigation in February.

“Everybody agrees [the government] needs to establish effective institutions to monitor and punish officials, discipline them if they violate laws and rules,” Chen Dingding, an assistant professor of government and public administration at the University of Macau, told the press. “They want to make sure senior party members are clean and competent and efficient.”

In China, environmental impact assessments are supposed to be conducted by independent, licensed evaluators, reviewed by environmental protection bureau authorities and presented to the public. The MEP, in fact, has been calling for greater transparency and oversight of the process. The newly amended Environmental Protection Law, which went into effect Jan. 1, also raised the legal bar in regard to transparency and environmental impact assessment requirements by cementing them into an official law.

The CCDI launched another round of investigations at the end of April to address problems related to bribery occurring in the oversight of environmental impact assessment approvals, solid waste management and management of water pollution funding, it said in a statement.

“Such low salaries surrounded by such opportunities, it is really difficult to resist those temptations,” Chen said. “I think they will do something to increase [top government official] salaries and benefits to make sure it is compatible with their position. More important is to cut off the opportunities so they don’t have so much power to make decisions themselves.”

In mid-June, the Supreme People’s Procuratorate (SPP), China’s top body for investigation, announced that its agencies had investigated or prosecuted more than 2,163 officials between January 2014 and April 2015 on crimes related to environmental protection that included bribery and dereliction of duty. The SPP launched a two-year campaign for monitoring how law enforcement handles environmental cases, particularly as they relate to corruption or improper use of official positions, it said.

China’s top leadership held meetings in early July where they approved several documents related to strengthening the accountability of officials over environmental protection responsibilities, said a State Council statement from July 5. The documents included guidelines for establishing a mechanism to monitor and audit how current officials handle environmental protection, and another one on auditing officials and Chinese Communist Party officers after they retire, a policy that could find officials guilty of dereliction of duty or other crimes after they leave the government.

31. China Plan Would Address False Pollution Monitoring

With pressure growing on Chinese companies to track their pollution, some of them have falsified data or tampered with monitoring systems, the Ministry of Environmental Protection said in releasing a draft plan to prevent and punish such behavior. The measure, announced July 7 and
open for public comment through July 20, would clarify responsibilities for investigating and punishing companies found to have fabricated their monitoring of water pollution, air pollution and—in some cases—energy use and carbon emissions.

Environmental protection bureaus at the county level and above would be primarily responsible for investigation, the ministry said.

Penalties for tampering with monitoring devices or falsifying data could include fines, although no levels were disclosed. Company officials and those responsible for managing the data who are found liable also could face detention of 10 to 15 days for serious infractions and five to 10 days for less serious violations, the ministry said.

Third-party verifiers who falsify information could be banned from doing such work in the future or have their licenses revoked.

32. Beijing Awarded 2022 Winter Olympics; Will Likely Help Clean Air Push

The Chinese capital city has been down this road before. It vowed to clean its dangerously polluted air ahead of the 2008 Summer Olympics, which it did manage to accomplish while the games were going on, but only through temporary measures such as closing factories and banning cars from the roads. But a wildly viral film on China’s massive air pollution problem, which aired earlier this year, shows that Beijing’s toxic smog has not gone away. In fact, cancer has become one of the leading causes of death in the city and throughout the country due to its abysmal air quality, according to Dr. David Suzuki.

Of course, in vying to secure its bid to host the 2022 Olympics, Beijing officials again made promises to clean the air. Last month, Beijing mayor Wang Anshun said the city will take “effective measures” to tackle air pollution and vowed to be up to the World Health Organization’s air quality standards by 2020. Wang said that clean air is not only important for the games, but also for public health.

But maybe things will be different this time around. “Beijing has invested $130 billion in more than 80 measures to reduce pollution from primary sources, including fuel oil, coal, industrial emissions and construction dust,” reports China Daily. And the measures seem to be working. The Beijing Municipal Bureau of Environmental Protection reported that air pollutants declined 17 percent in May from the same period last year. The city still has a long way to go, but city officials say they plan to do even more in the seven years leading up to the games, including further investment and more than 500 measures.

There’s one other small issue with Beijing hosting the Olympics: not much snow. The areas outside of Beijing which will host alpine skiing, freestyle skiing, snowboarding and Nordic skiing “have minimal annual snowfall and for the Games would rely completely on artificial snow,” reports Business Insider. “There would be no opportunity to haul snow from higher elevations for contingency maintenance to the racecourses so a contingency plan would rely on stockpiled man-made snow.”

33. China Prepares 'California-Style' Scheme For Green Cars

China is preparing a new scheme to encourage automakers and consumers to use electric and hybrid vehicles, learning lessons from California’s efforts to promote a similar switch, according to the head of a major state-owned carmaker. The system will extend incentives to traditional gas-
electric hybrids, often excluded from promotional programs in the past because that segment of the market was dominated by Japanese companies such as Toyota Motor Corp.

While the initiative is expected to benefit Chinese carmakers such as BYD Co and SAIC Motor Corp, which have stepped up production of traditional hybrids in recent years, global rivals are also positioned to take advantage of an expected increase in demand. The likes of General Motors and Volkswagen have already pledged to invest heavily in developing environmentally friendly vehicles for the Chinese market.

The proposed government scheme could be implemented in the first half of next year, said Xu Heyi, chairman of Beijing Automotive Group, parent of BAIC Motor Corp.

China has set fuel economy standards that grow increasingly aggressive through 2020 to relieve heavy air pollution in much of the country, but it has yet to specify how such a plan will be enforced.

The new scheme to promote "new energy" cars, which generally refers to all-electric battery cars or heavily electrified plug-in hybrids, gives automakers credits for producing and selling such vehicles, helping them to meet new and more stringent fuel-economy rules.

"Relevant national departments are currently studying and drawing lessons from the U.S. state of California's methods to encourage the use of new energy cars (to tackle vehicle emissions)," said Xu, who as leader of a major state-owned company is also a high-ranking Communist Party official.

There would be two schemes, one for automakers and one for consumers, to promote green cars in China, Xu told reporters at a media event at its Beijing headquarters.

Automakers would be given the most credits for making all-electric battery vehicles, fewer for plug-in hybrids and the least credits for traditional gasoline-electric hybrids. Traditional gasoline cars that do not meet the new fuel economy requirements would get negative points, he said. Carmakers failing to meet the new national fuel economy requirements could then buy credits from over-achieving companies to make up the difference.

Meanwhile, consumers would receive credits redeemable for money based on the distance they drive in full electric mode, with drivers using gasoline being required to pay an additional fee for the distance driven.

**34. China’s Air Less Polluted In First Half Of 2015: Greenpeace**

China saw levels of two common air pollutants improve modestly in the first half of 2015, environmental group Greenpeace East Asia said. Average levels of PM2.5 - particulate matter with a diameter of 2.5 micrometers that can penetrate deep into the lungs - fell 16 percent in the first six months from a year ago, the group said, adding that sulfur dioxide levels also fell 18 percent.

"The fall in coal consumption is the principal reason for recent improvements in air quality," said the group's climate and environmental campaigner, Dong Liansai, in a statement.

Beijing, the capital, was ranked as the region with the third-worst levels of PM2.5, behind neighboring Hebei province and central Henan province, slipping from the fourth place in the first
quarter. Shanghai was ranked as having the 11th-worst levels, versus a 14th place in the first quarter.

Greenpeace East Asia’s calculations were based on data provided by China’s environment ministry from monitoring stations in 189 cities across the country.

Recently, the ministry said nearly 75 percent of China’s big cities had failed to meet air quality standards in June, an improvement over the same month last year. Beijing saw PM2.5 levels rise 11 percent last month.

Amid growing public disquiet about smog and other environmental risks, China has declared a war on pollution, vowing to abandon a decades-old growth-at-all-costs economic model that has spoilt much of its water, skies and soil.

China has sought to improve transparency and compel polluters to provide comprehensive and real-time emissions data, but doubts have arisen in the past about the accuracy of Chinese air pollution indices. In April, China’s vice minister for environmental protection announced a two-year inspection campaign to root out fake air quality data and accused some local governments of manipulating the information to meet national standards.

Greenpeace East Asia did not provide comparisons for other pollutants, such as carbon monoxide, nitrogen dioxide, and ozone, or for levels of particulate matter over 10 micrometers in diameter, known as PM10.

### 35. China Tightens Emissions Targets for Coal-Fired Plants

China has given its eight major state-owned coal-fired electricity providers new targets for the amount of their energy production capacity they need to upgrade to meet emissions reduction and energy efficiency targets by the end of the year.

The goals, almost all of which were strengthened, are in line with an action plan on upgrading the coal-fired power industry released last September. The plan requires coal-fired power plants to upgrade a certain percentage of their energy production capacity—using more advanced processes and technological upgrades than elsewhere in their plants—with the ultimate goal of cutting airborne pollution and carbon emissions and increasing energy efficiency.

A National Energy Administration announcement July 28 said the eight companies—China Huaneng Group, Datang International Power Generation Co. Ltd, China Huadian Corp., China Guodian Corp., China Power Investment Corp., China Shenhua Energy Group, Huarun Group, and the State Development & Investment Corp.—also will be required to report their progress to authorities every quarter.

Originally under the action plan, which runs through 2020, seven of the eight companies were given lower 2015 targets. But the targets are subject to revisions, such as those announced July 28th. Key developments include:

- China Power Investment Corp. saw a large jump in the amount of energy production it will have to upgrade for greater energy efficiency, with a new goal of 15.6 gigawatts compared to the original target of 5.49 gigawatts. The company also must upgrade 6.16 gigawatts of capacity for emissions reduction goals compared to a previous figure of 1.3 gigawatts.
Huadian's new target includes emissions reduction upgrades for 6.47 gigawatts compared with the previously announced target of 2.16 gigawatts.

The State Development & Investment Co. must improve its energy savings targets, with 6.08 gigawatts required to be upgraded compared to the 2.55 gigawatts originally announced.

Huaeng now will be required to upgrade emissions reduction processes and technology on 5.39 gigawatts of its power production, compared to its original target of 1.6 gigawatts.

Datang, which originally had no emissions upgrade target for this year, now has a 2015 emissions reduction upgrade target of 1.84 gigawatts.

Shenhua was the only provider whose target was lowered, with a new goal of 9 gigawatts of capacity upgrades for emissions reduction compared to the 12.53 gigawatts previously set.

36. China's Anti-Pollution Drive Sees Drop in Coal Sales

China's push to ease its reliance on coal and the fossil-fuel pollution choking Beijing's skies has started to affect sales of coal from the nation's biggest supplier. China Shenhua Energy Co. Ltd.'s shipments dropped 24 percent in the first half of the year compared with a year ago, according to a statement released on July 20. The company, which employs more than 90,000 people and has a market value of $59 billion, blamed falling consumption and “heightened pressure for environmental protection” for the drop.

President Xi Jinping's drive to punish polluters “with an iron hand” is aimed at seeing greenhouse gas emissions peak around 2030 and removing the smog from the skyline of China's biggest cities. The result is shifting more resources to renewable energy and starting to ratchet back on coal demand.

China remains the biggest emitter of the pollution blamed for global warming with the majority of its electricity generated from coal-fired plants, according to the International Energy Agency. The institution that advises industrial nations estimates China could cut that portion.

37. Gujarat High Court Seeks Ideas on Banning Old Diesel Vehicles

The Gujarat high court has directed the state government to come up with suggestions on discontinuing the use of diesel vehicles that had been plying on roads for more than 10 years. The high court's concern is to bring down pollution levels. It has also sought details from the state government and the Gujarat Pollution Control Board (GPCB) on the level of pollution caused by diesel vehicles, particularly those that were 10 years old.

A bench of Justice Jayant Patel and Justice JB Pardiwala sought to know what measures could be taken to phase out the 10-year-old diesel vehicles. The bench was hearing a review petition filed by Indian Auto LPG Coalition against an HC order of July 25, 2012 directing that all vehicles in the state switch to natural gas so that pollution levels could be brought down.

The court has asked the authorities to submit all details about vehicles registered with the RTOs how many of them use petrol, diesel or gas. The number of two-wheelers and four-wheelers,
besides their years of registration, are also to be provided. The government submitted that there are more than 18 lakh diesel vehicles in the state.

The court also discussed whether the state government could grant subsidy to those who are willing to dispose of their old diesel vehicles and purchase new ones to help reduce pollution.

During the last hearing, the state government had expressed its inability to force diesel vehicles to switch over to CNG due to technical limitations. This made the court to ask it to come up with a mechanism to scrap old diesel vehicles. The court said that it is concerned with pollution levels and health is a state subject. The judges asked the lawyer to verify pollution level first and then make an assertion.

38. City Chokes As Polluting Vehicles Go Scot-Free

Pollution testing centers functioning according to their whims and fancies

Many vehicles emitting high levels of pollution go scot-free in the city, thanks to ineffective monitoring by Regional Transport Authority (RTA) and inefficiency of the mobile pollution testing centers.

According to the RTA sources, there are 41 registered pollution testing centers in the city for checking the emission levels of the vehicles and issuing Pollution Under Control Certificates (PUCC).

It is mandatory for vehicle owners to obtain PUCC which have validity for three months, six months and a year. However, the pollution testing centers are reportedly issuing PUCC even without testing vehicles. Hardly any vehicle fails the test.

The center operators are supposed to maintain a record of the vehicles that have obtained PUCC and submit the same to the RTA every month to which the testing centers hardly comply. Meaning: many vehicles with high emission levels are plying unchecked.

The regulatory authority does not have any record as to how many vehicles appear for the emission test and about those getting failed. Quite a few unauthorized centers are also functioning without valid license, it is learnt. The centers have to mandatorily renew their licenses in every three years.
Interestingly, the Regional Transport Authority does not have any mechanism to keep a track on
the functioning of the pollution testing centers, unless a special drive is conducted to detect the
irregularities.

39. India Calls for End to Extravagance as It Works on Climate Plan

India’s Environment Minister Prakash Javadekar called on richer nations to change their lifestyles
in an effort to halt climate change, noting his own country is working on a robust series of initiatives
for curbing pollution. “Extravagant consumption will not sustain the Earth forever and therefore all
will have to change,” Javadekar said in a July 13 interview in New Delhi.

He also said India will present two scenarios for its own greenhouse gas emissions in time for the
landmark United Nations summit on climate change this year—one charting what India can do on
its own and another showing what is possible with increased financial and technical aid from
overseas.

The comments give the clearest sense yet for the terms on which India will join the international
effort on restraining greenhouse gases. Once in the second-tier of polluters, India’s emissions
now rank fourth in the world behind the China, the U.S. and European Union. And unlike the
others, it hasn’t yet made any pledge on when its levels will start to decline.

The remarks were meant to pressure richer nations into making good on their 2009 pledge to
raise the level of climate related aid for poorer nations to $100 billion a year by the end of this
decade.

Developed countries forked out about $10 billion a year in aid from 2010 through to 2012, but
have refused to spell out how they will meet the $100 billion pledge. So far they have pledged
about $10 billion to the Green Climate Fund that was set up to channel a portion of the promised
aid, a figure described by Javedekar as “ridiculous.”

So far, almost 50 countries constituting more than half the world’s emissions have submitted their
promises for the UN talks. India is still working on its submission.

The minister said the plan will indicate parameters like energy efficiency, reducing the energy
intensity of the economy, expanding the energy mix and increasing the stock of forests that absorb
carbon dioxide, the chief greenhouse gas.

“We’ll also give a scenario where if finance and technological support is available what more can
be done,” he said.

India, the minister said, will need more coal, though it is seeking cleaner ways to burn the fuel. It
also has enlarged its green energy target and pledged to invest $17 billion over the next five years
in forests.

When asked if he had a year of peaking emissions in his mind, Javadekar said, “No country has
asked us this question.”

40. Price of Premium, Subsidized Diesel to Stay Steady in Indonesia in August
The Indonesian government has announced that the price of subsidized Premium fuel, a widely used low-octane gasoline, and subsidized diesel will stay steady this month despite the global crude oil price decline. Energy and Mineral Resources Minister Sudirman Said said the price of Premium for Java, Madura and Bali islands will stay at Rp 7,400 (54 cents) per liter and at Rp 7,300 per liter outside of the three islands, while the price of subsidized diesel (Solar) will remain the same at Rp 6,900.

In an effort to maintain economic stability despite the decline in global prices, the minister said the government would not allow the price of the subsidized fuels to fluctuate rapidly.

He also said state energy company Pertamina, which distributes the two type of fuels, still posted Rp 12.5 trillion in losses in distributing the two subsidized fuels in the January to July period. The loss was attributed to debts accumulated by the company as it has to sell subsidized fuels below costs.

The government has found that price setting for fuel is better done every six months, and changes will be unlikely in the coming months. “In November, it will be decided how it will be managed,” Sudirman said.

Agus Cahyono, a director for oil and gas development at the Ministry of Energy and Mineral Resources, said the government would create a so-called “stabilization fund” to ensure it has buffer funds to deal with fluctuating oil prices and maintain retail stability in domestic markets. “For this year, it hasn't been budgeted in the state budget, it will be discussed for the 2016 budget,” he said.

He added the stabilization fund shouldn’t be seen as a subsidy, as it will only serve to help stabilize the fuel price so that the private sector can make long-term calculations needed for business planning.

41. PTT Philippines to Import Euro 4 Fuels in Q4

PTT Philippines Corp., a subsidiary of Thailand’s petroleum giant, will start importing Euro 4 emission standard compliant fuels this year. PTT Philippines President and CEO Sukanya Seriyothin said the imported petroleum products will be sourced from the parent firm in Thailand starting in the fourth quarter of the year.

She, however, did not elaborate on the volume and other details of the shipments, other than saying that the move is in compliance with the directive from the Department of Energy (DOE) requiring all oil companies to sell Euro 4 fuels starting January 2016.

The Department of Environment and Natural Resources (DENR) earlier set the deadline for the implementation of the Euro 4 emission standard in July this year.

But the DOE pointed out the earlier deadline wasn’t doable for oil companies. “Our mother company has been producing and offering Euro 4 emission standard fuels long ago so it can supply our requirement,” she said.

DOE Officer-in-Charge Zenaida Y. Monsada earlier said that oil companies have already made arrangements with their suppliers to make the Euro 4 fuels available by January 2016.
The DENR said sulfur levels of diesel and gasoline should stand at 0.005 percent or 50 parts per million (ppm) under the new standard from 0.05 percent or 500 ppm under Euro 2 standards. The benzene content of gasoline will also go down to 1 percent from the 5 percent. The DENR noted that Euro 4 products have 35 percent aromatics, unlike Euro 2 fuels which have no limit set for this measure.

42. India: Petrol Price Cut by Rs 2.43/Liter, Diesel Rs 3.60 on Lower Crude

Petrol in Delhi will cost Rs 64.47 per liter from Saturday instead of Rs 66.90 at present, while a liter of diesel will cost Rs 46.12 as against Rs 49.72 currently, Indian Oil Corp (IOC) said in a statement. Petrol and diesel prices were last cut by Rs 2 per liter each, excluding local sales tax, from 16 July but consumers in Delhi were robbed of the benefit as Arvind Kejriwal government raised VAT on the two fuels. As a result, petrol price in Delhi went up by 28 paise a liter after considering a local government decision to hike VAT or sales tax on the fuel from 20 to 25 percent. Rates of diesel, on which VAT was raised from 12.5 percent to 16.6 percent, saw a reduction of 50 paise per liter.

Prior to this, the price of petrol was cut on 1 July by 31 paise per liter and diesel by 71 paise a liter.

"Prices of petrol and diesel were last revised on 16 July 2015. Since the last price change, there has been a decrease in international prices of both petrol and diesel. INR-USD exchange rate has, however, depreciated during this period. "Combined impact of both these factors warrants a downward revision in prices, the impact of which is being passed on to the consumers with this price decrease," the statement said.

State-owned fuel retailers -- IOC, Bharat Petroleum Corp (BPCL) and Hindustan Petroleum Corp (HPCL) -- revise their petrol and diesel prices on the 1st and 16th of every month based on average imported cost and rupee-dollar exchange rate in the previous fortnight.

"The movement of prices in international oil market and Rupee-USD exchange rate shall continue to be monitored closely and developing trends of the market will be reflected in future price changes," the statement said.

43. General Motors to Invest $1 Billion in India, Move To Create 12,000 Jobs

General Motors will invest $1 billion in the next few years to turn operations in India into a new global auto manufacturing and export hub aimed at boosting sales in fast-growing emerging markets, top executives announced. The investments will be made at the company's Talegaon plant in Maharashtra.

The investment is part of GM's plan to invest $5 billion over several years to develop a global family of Chevrolet vehicles with Shanghai Automotive Industry Corp (SAIC), the state-owned Chinese automaker that is GM's primary partner in China.

GM Chief Executive Officer Mary Barra said at a briefing in New Delhi that the investment in India was expected to create 12,000 jobs at the company and its suppliers in Asia's third-largest economy.
GM will also launch 10 new domestically manufactured vehicles in India over the next five years in a push to double its market share in the country by 2020, Stefan Jacoby, GM's chief of international operations, told a news conference.

GM sold 56,700 vehicles in India in 2014 and had a market share of 1.8 percent.

**44. Bus Fares Slashed In Odisha after Cut in Diesel Prices**

With Indian Oil Corporation Ltd (IOCL) announcing reduction in the price of diesel by Rs 3.60 per liter, bus fares in Odisha were reduced under the automatic mechanism today. The public sector company had slashed petrol and diesel prices yesterday following a fall in international crude oil prices consequent to the Iran nuclear deal.

This is the third time bus fares in the state have been revised after the automatic mechanism was adopted by the government in June this year. According to a notification by the Commerce and Transport department, the fare for ordinary and express buses has been reduced by two paise per km and that of delux and AC delux buses by 4 paise per km.

The fare for ordinary buses has been reduced from 58 paise to 56 paisa per km, express buses from 61 paise to 59 paise, delux buses from 80 paise to 76 paise and AC delux buses from Rs 1.01 to 97 paisa per km.

It may be mentioned that the state government had announced the implementation of the automatic mechanism for revision of fares on June 4 this year conceding a long-standing demand of the All Odisha Private Bus Owners’ Association. Under the automatic mechanism system, rise and fall in bus fares would be determined based on the rise and fall of fuel prices.

**45. South Korea Targets 1.3 % Annual Airline Fuel Efficiency Gain Through 2025**

South Korea's aviation industry will work toward a 1.3 percent annual improvement in commercial airline fuel efficiency through 2025 as part of its commitment to the International Civil Aviation Organization's greenhouse gas emissions reduction initiative, the Ministry of Land, Infrastructure and Transport said July 1. "The government, airline companies and airport operators will work together harder toward greenhouse gas emissions reductions in the international aviation sector," the ministry said in a statement.

The ministry submitted South Korea's second triennial action plan to the International Civil Aviation Organization (ICAO) on June 30th in accordance with the ICAO's 2010 goals for achieving a global annual average fuel efficiency improvement of 2 percent until 2020 and reaching global carbon-neutral growth by 2020.

South Korea's updated action plan calls for achieving a fuel efficiency of 0.3047 liter per revenue ton kilometer in 2025 compared with the worldwide average of 0.3683 liter in 2012.

The fuel efficiency goal represents a 13 percent reduction, or 3,347,000 tons of greenhouse gas emissions from commercial airline operations by 2025 compared with business-as-usual emissions of 24,970,000 tons, the ministry said.

In the action plan, South Korea said the fuel efficiency and emissions reduction goals would be achieved by 11 airport-, airline- and aircraft-specific operational methods including fleet renewal, airline route double tracking, idle reverse thrust and single-engine taxi-in.
Korean Air Lines Co. Ltd. and Asiana Airlines Inc., as well as five low-cost carriers, agreed with the ministry in September 2014 to improve aircraft fuel economy for their international passenger and cargo flights by 2 percent to 3 percent annually in 2015 and 2016 as part of their voluntary commitment.


China's vow to peak its carbon pollution by 2030 or sooner while ratcheting up its use of renewable energy is an “ambitious” offer that will require significant changes in its economic and climate policies, a U.S. State Department official said July 14. The June pledge, representing the rapidly developing nation’s contribution to a global climate accord to be negotiated later this year in Paris, “will require substantial action by China that represents significant deviation from a business-as-usual or a no-action scenario,” said Vance Wagner, China counselor with the U.S. Office of the Special Envoy for Climate Change.

“As a package, [China's] targets and actions represent an ambitious effort that will require substantial new policies, economic reform and investments in clean technology, renewable energy and technical” innovation, Wagner said. Wagner spoke at a forum held by the World Resources Institute and the Environmental & Energy Study Institute.

China’s pledge to peak its carbon dioxide emissions by 2030 first emerged in a joint U.S.-China announcement in November 2014, where the world’s largest nation also vowed to increase the share of nonfossil fuels in its primary energy mix to around 20 percent by 2030.

The U.S., in turn, vowed to cut its emissions as much as 28 percent by 2025 from 2005 levels.

But China, which has supplanted the U.S. as the world’s top emitter of greenhouse gases, added two elements when it formally submitted it pledge to the United Nations in June: It vowed to cut the carbon intensity of its economy by 60 percent to 65 percent from its 2005 level and to increase forest cover by about 4.5 billion cubic meters over its 2005 forest stock, to help absorb carbon.

Known in UN parlance as its Intended Nationally Determined Contribution, China’s pledge also states that it will be “making best efforts to peak early”—meaning before 2030.

Others participating in the July 14 forum, including Wang Tao, resident scholar at the Carnegie-Tsinghua Center for Global Policy, said there are some encouraging signs of progress in China, including a recent decline in coal consumption and its emergence as the global leader in clean energy investment—$89.5 billion invested in 2014 alone, according to EESI figures.

The U.S. ranks second in clean energy investment, according to EESI, investing $51.8 billion last year.

Still, China’s pledge that its emissions will peak in 15 years also would allow those emissions to grow year after year until then, leading many congressional Republicans and other skeptics of its offer to question whether it can do more.

China in 2013 was responsible for nearly 30 percent of total carbon dioxide emissions, according to the Global Carbon Project, and its share of global emissions is projected to increase in coming years.
Joanna Lewis, associate professor of science, technology and international affairs at Georgetown University’s Edmund A. Walsh School of Foreign Service, said China’s coal use would have to peak by 2020 for it to meet its 2030 peak emissions pledge. “That will be quite a challenge, even with the slower growth of coal-fired power plants and coal use” in China of late, she said, largely due to it’s suddenly struggling economy.

China’s economy expanded by 7.4 percent in 2014, according to the World Bank’s “China Economic Update—June 2015,” issued July 3, “sharply slower than the 10 percent annual growth rate China average for three consecutive decades.”

Lewis said China’s push to have its emissions peak by 2030 “falls in the ambitious range of projections,” which suggests it will need to take significant and additional domestic policy actions to hit that mark.

47. Japan Commits to 26 Percent Emissions Cut by 2030

Japan said it will formally submit a long-term greenhouse gas reduction plan to the United Nations Framework Convention on Climate Change on July 17th, committing to reduce emissions 26 percent by 2030 compared to 2013 levels. The plan largely ratified a pledge announced by Prime Minister Shinzo Abe and his Cabinet earlier this year.

Some environmental groups have objected to Japan’s starting point of 2013, a year the country’s emissions were elevated as it burned more fossil fuels than normal to replace cleaner power that would have come from the country’s nuclear reactors, which were shut down after the 2011 Fukushima disaster. Other major economies that have made their pledges to the UN have used 1990 or 2005 as baseline years. The pledges are being submitted ahead of the end-of-year climate summit in Paris.

Climate Action Tracker, whose researchers are analyzing pledges by countries, has called Japan’s plan “inadequate,” according to press reports. Kyodo news organization said: “The new reduction target, which is touted by Abe as ‘ambitious,’ only represents an 18 percent cut compared with the 1997 Kyoto Protocol’s base year of 1990 and is viewed as insufficient among environmental activists.”

The European Union has committed to cut emissions by at least 40 percent by 2030 compared to 1990 levels, the U.S. has pledged to cut emissions 26 percent to 28 percent by 2025 compared to 2005 levels, Russia has pledged to reduce emissions 25 percent to 30 percent by 2030 compared to 1990 levels, and Canada has agreed to cut emissions 30 percent by 2030 compared to 2005 levels. Late last month, China—the world’s top emitter and second-biggest economy—pledged to cut its carbon emissions per unit of economic output 60 percent to 65 percent by 2030 from 2005 levels.

Previously, Japan had been using 2005 as a benchmark year in calculating long-term greenhouse gas emissions reduction goals, but after the 2011 earthquake, tsunami and Fukushima nuclear power reactor meltdown, the country changed the base year to 2013. In that year, the country’s greenhouse gas emissions surged after the shutdown of its nuclear reactors.

On July 16, Japan’s Cabinet set a long-term energy mix that called for generating 20 percent to 22 percent of gross national electricity output with nuclear power and 22 percent to 24 percent with renewable energy sources, according to officials of the Ministry of the Environment’s Low-Carbon Society Promotion Office. An official of the Office said meeting the 26 percent reduction
target is conditioned on reopening nuclear power reactors. She said much of the 26 percent target would be achievable with a combination of energy conservation and energy use efficiency improvements, such as power grid improvements and changes to steelmaking processes.

**48. China Passes New Pollution Law, Sets Sights on Coal Consumption Cap**

Legislators have approved amendments to China's 15-year-old air pollution law that grant the state new powers to punish offenders and create a legal framework to cap coal consumption, the Asian giant's biggest source of smog. The draft amendments were passed by 154 votes to 4, with five abstentions, Zhong Xuequan, spokesman for the National People's Congress (NPC), China's parliament, told a media briefing on Saturday.

The ruling Communist Party has acknowledged the damage that decades of untrammeled economic growth have done to China's skies, rivers and soil. It is now trying to equip its environmental inspection offices with greater powers and more resources to tackle persistent polluters and the local governments that protect them.

The amendments are expected to make local governments directly responsible for meeting environmental targets. They also ban firms from temporarily switching off polluting equipment during inspections and outlaw other behavior designed to distort emission readings.

Tong Weidong, vice-director of the NPC's legal work committee, told the briefing the law would improve the way local authorities were assessed and allow them to draw up their own plans to meet environmental targets. "Amendments to this air pollution law have strengthened pollution treatment from the source - from sources such as industrial policy, energy consumption and automobile pollution," Tong said.

However, researchers said the changes do not go far enough and that the third reading of the bill should have been postponed until all its shortcomings had been resolved. Tong said such criticism was "very normal" and that it was impossible to include all proposals in the law.

Chang Jiwen, an environmental researcher with the Development and Research Council, a government think tank, has described the new law as "not very useful". "It is filled with many slogan-like clauses and is more like a policy document than legislation," Chang told the state-backed newspaper China Business. He said many experts had said the bill should have been postponed.

Lawmakers had rejected proposals to include specific coal consumption targets in the law and also ruled out a clause allowing local authorities to set their own restrictions on car use, the official Xinhua news agency said earlier this week.

Wang Yi, head of the policy committee of the China Academy of Sciences and a member of the NPC's standing committee, has told Chinese media the law fails to set clear goals on emissions and air quality standards.

According to the Ministry of Environmental Protection, concentrations of hazardous breathable particles known as PM2.5 fell 17.1 percent in the first half of 2015 to 58 micrograms per cubic meter. China doesn't expect to meet the state standard of 35 micrograms until 2030.

**49. China's Steel City Feels Impact of Pollution Regulations**
Struggling from weak demand and facing new rules to clean up pollution, some firms in China's top steel producing city have scaled back production or even closed completely, lifting local steel prices off 20-year lows.

China is using tougher environmental rules to help tackle a severe steel capacity glut that has depressed prices and saddled much of the sector - the world's biggest - with crippling debt. Tangshan, which is 200 km (124 miles) east of Beijing and produces more steel a year than the United States, has been on the frontline of campaigns to cut smog and tackle overcapacity. The city has pledged to reduce its annual crude steel capacity by 28 million tons from 2013 until 2017, roughly a fifth of its total, and its steel firms are now being forced to undergo costly upgrades.

"There are so many plants that are having to cut or stop production," said Zhou Junjia, a sales manager at Baifeng Iron and Steel Corporation, noting that four privately owned steel firms nearby had recently been forced to close. "In Tangshan, there are just too many plants selling steel products. We travel around to customers and to big steel markets in other large cities and no one is buying," added Zhou.

Baifeng has cut daily crude steel production by 40 percent to 1,200 tons in recent months, which would amount to an annual cut of 292,000 tons. "We are at least not losing money and are covering our production costs," he said, noting that it could break even by relying on its processing and trading business.

The premises of Kailida Iron and Steel, a private producer located nearby, appeared to have been abandoned and attempts to reach staff failed with their phone lines disconnected.

In the nearby township of Fengnan, the Qingquan steelworks closed in late 2013 for what staff said was a temporary shut down after it was unable to pay its workers. While guards remain outside the plant, operations have not yet resumed more than a year and a half later.

Tangshan is making industrial firms - including steel mills - renovate facilities over the next few months in order to meet strict new pollution standards.

Mills in areas surrounding Beijing will also have to reduce output from Aug. 20 to Sept. 3 to help air quality as the city commemorates the 70th anniversary of the end of the Second World War.

The cut backs are already having an impact on local steel prices, with steel billet in Tangshan rising by 12.6 percent to 1,880 yuan per ton since hitting a low of 1,670 yuan on July 8, according to data provider Mysteel.

Xue Heping, a China Iron and Steel Association (CISA) analyst, warned against "blind optimism" but said in a report that "the worst period for the steel market is already passing." However, prices in Tangshan remain more than 12 percent lower than the start of the year and 30 percent down from August 2014. CISA's composite price index is some 37 percent lower than the reference prices set in 1994.

Jiang Ping, an analyst with ChinaTSI, an industry consultancy, said expectations of tougher environmental controls and supply cutbacks were helping prices. "But I don't think there is any long-term support for prices because none of this solves the fundamental issues of overcapacity and weak demand," she said.
50. Beijing to Limit Cars, Factories to Ensure Clean Air for War Anniversary

Beijing will limit the number of vehicles on the streets and shut factories to ensure clean air during a commemoration of the 70th anniversary of the end of World War Two, the government has announced. The heavily polluted capital, often cloaked in a choking gray haze, will hold a military parade on September 3rd, which is likely to center around Tiananmen Square in the heart of the city. The parade will be a highlight of a series of events the government has planned for the anniversary of Japan's formal surrender on Sept. 2, 1945.

From August 20 to September 3, the city will halve the number of vehicles allowed on the streets, restricting cars according to their license plate numbers, the People's Daily, the ruling Communist Party's official newspaper, said on its microblog. The city will also impose temporary controls on industry, coal-burning boilers and construction, forcing them either to stop or curb operations during the period, the government said on its microblog account on Weibo.

The capital, which has been enveloped by smog for the past few weeks, often enacts pollution controls ahead of major events such as the 2008 Olympic Games and a meeting of Asia-Pacific Economic Cooperation (APEC) forum leaders last year. The city government said it was drawing from the experience of the 2008 Games and the APEC meeting to ensure "the full protection of air quality during the commemoration".

The Xinhua state news agency said authorities would impose temporary air traffic restrictions over Beijing during the military parade.

Workers will also be given three days off over the anniversary, ostensibly to ease congestion.

Chinese communist and nationalist forces battled Japanese forces that occupied much of China during World War Two. The Chinese forces later fought a civil war which communist forces won in 1949.

51. Air Pollution in China Linked To Ozone in US West Coast

A new study links the increase in ozone precursor emissions in Asia to increased levels of ozone over the US's West Coast. In the study, a team of six researchers from US and Dutch universities found that ozone concentrations over China increased by about 7% between 2005 and 2010 and that ozone traveling in the air from China has reached the western part of the US, challenging the reduction of ozone levels there.

China's meandering pollution likely offset the 2005-10 reduction in ozone that had been expected following US policies aimed at reducing emissions, by roughly 43%, the researchers found.

Over that period, the US government put in place emission-reducing measures and curbed the production of ozone-forming nitrogen oxides by 20% on the West Coast, according to Wageningen University. Yet that did not improve the quality of the air especially in terms of ozone reduction. And the increased air pollution in Asia might be at least partly to blame.

Lead researcher Willem Verstraeten of Wageningen University in the Netherlands said in statement that the "dominant westerly winds blew this air pollution straight across to the United States." He added: "As a manner of speaking, China is exporting its air pollution to the West Coast of America."
The researchers determined what was happening by using satellite measurements of nitrogen oxide and ozone and combining it with a chemistry transport model to identify "the causes of increasing ozone levels and analyze intercontinental transport of ozone pollution for the first time ever," according to Verstraeten.

High levels of ground-level ozone act as a greenhouse gas, contributing to pollution and climate change.

The researchers say this shows that the fight against increasing ozone levels and climate change must be global. "Local measures to improve air quality certainly help, but the real solution lies in a global strategy," Verstraeten said. The study concluded that "air quality and regional climate change mitigation policies could eventually have limited impact if not considered in a global context, at least for free-tropospheric O3 and its precursors."

**52. Dongfeng to Jointly Develop Green Cars with Saab Owner: Xinhua**

Chinese automakers Dongfeng Motor Group Co Ltd and National Electric Vehicle Sweden (NEVS), which bought bankrupt carmaker Saab in 2012, have signed an agreement to jointly develop green cars, the state-owned Xinhua news agency reported. The agreement will help Dongfeng sell its own brand of cars through the NEVS dealer network in Europe and the United States, and also meet European legal and technical requirements, Xinhua reported.

The report did not give financial terms of the deal.

The deal is another step forward for NEVS after financial problems led it to stop production of Saab cars in Sweden last year and defense contractor Saab AB, from which Saab Automobile was created in 1990, disputed its use of the brand name.

The agreement will also allow NEVS' planned factory in Tianjin to draw on the massive supplier network of Dongfeng, China's second largest automaker.

NEVS announced in June that it broke ground on a factory with a potential capacity of 200,000 cars as well as a research and development center, with two Chinese partners pledging to invest 1.2 billion yuan ($187.68 million). It said the project would focus specifically on "new energy vehicles", a Chinese term for electric and highly electrified vehicles.

**53. China's Carbon Count Could Be Overstated By 14 Percent: Nature**

International organizations could be overestimating emissions from China, the world's biggest producer of greenhouse gases because of problems in the way they calculate their data, said a new study published by Nature.

With talks on a new global climate accord set to take place in Paris in December, China, the world's biggest producer of climate-warming gas, has promised to bring emissions to a peak by "around 2030", but it remains unclear how much CO2 China is actually producing and how much it will produce in the next 15 years.

While there is no official figure for Chinese carbon emissions last year, estimates stand at around 9-10 billion tons, while forecasts for 2030 range anywhere between 11 billion and 20 billion tons. "Without an accurate baseline, any target will become a number-crunching game," said Dabo
Guan, Chair of Climate Change Economics at the University of East Anglia, and one of the authors of the Nature study.

The paper said organizations like the European Union's Emissions Database for Global Atmospheric Research (EDGAR) have overestimated China's emissions by as much as 14 percent by using default conversion rates that should not apply in China.

"The main difference in our paper is for the first time we have taken fuel quality into consideration, which is missing from other estimates," said Guan. Taking into account China's lower quality coal, the study calculated China's 2013 carbon emissions at 9.13 billion tons, below the EDGAR figure and 5.6 percent lower than an estimate in oil major BP's statistical yearbook.

The Intergovernmental Panel on Climate Change (IPCC) recommends a default "emission factor" of 0.713 tons of carbon for every ton of coal produced, but the Nature authors, looking at around 600 samples from domestic mines, said the figure in China should be closer to 0.518 tons.

The study also estimated China produced 2.9 gigatons less carbon dioxide than previous estimates over 2000-2013, although Chinese government researchers said it might have overestimated lower-grade coal consumption over the period. "More cheaper poor quality coal was supplied in 2013 as the industry was hit by lower demand in China," said Jiang Kejun of the Energy Research Institute, a government think tank. "It is not accurate to use emission factors for a single year to calculate China's emissions."

The last time Beijing gave an official number was for 2005, when emissions stood at "approximately" 7.47 billion tons. It is due to submit an updated number for 2010 next year.

While the study might ease some of the pressure on China, it still has a lot to do to rein in its spiraling greenhouse gas emissions, said Guan. "Our estimates, which use a lower emission factor, don't change the fact that China is still the largest emitter in the world," he said. "This will give some carbon space for the less-developed regions in China but it is not a game-changer. It won't disrupt China's mitigation efforts."

54. China Issues Over 25,000 Environmental Citations Against Erring Companies

Chinese environmental regulators have announced that more than 25,000 citations have been issued against polluting companies in the first six months of the year. A newly enacted environment law has given authorities a greater mandate to go after companies and individuals responsible for pollution.

Xinhua Finance reported that the Ministry of Environmental Protections ordered almost 10,000 companies to stop their operations.

The aggregated fines from the environmental citations reached more than 200 million yuan (roughly $37 million). The Ministry also announced that more than 700 cases have been turned over to local police departments since the violators were also criminally liable.

China's Environmental Protection Law (EPL) was imposed only this year and many companies and individuals have already been prosecuted for violations. Around ten Chinese cities have been given administrative sanction by the ministry for failure to stop companies from polluting the environment. Officials from at least four of the mentioned cities were either admonished or fired from their position.
Meanwhile, a number of steel manufacturers in the industrial city of Linyi have complained about the economic burden of closing down their factories because of environmental violations. Company representatives said the shutdown will lead to unemployment for thousands of workers as well as the loss of substantial tax revenue for the local government.

However, the Environmental ministry has dismissed the complaint saying that factories are shut down when they blatantly ignore warnings regarding waste disposal.

So far, local officials have ordered more than 400 manufacturers to clean up their operations. Around 30 of those companies will have to be moved elsewhere.

Environment Minister Chen Jining announced on August 4th that his agency will take a more aggressive stance against polluters. Chen noted that the environment has paid a very high price in the country's race to economic development during a government meeting to formulate the next five-year plan for China. He said that the air quality in many parts of China contains various toxic chemicals and that the country's ecology has deteriorated greatly.

Fortunately, the next five-year plan, which will come into effect in 2016, will include plans to safeguard the environment of China.

55. China's Weaker Yuan Could Trigger New Wave of Diesel Exports

A weaker yuan makes Chinese exports more competitive and could help refiners such as Sinopec and Petrochina shed excess diesel as local demand falls amid an economic slowdown that has left storage tanks brimming. The government has already more than doubled diesel export quotas for the year so far by granting additional allowances of 2.86 million tons in its third quarter review of domestic supply and demand.

"Even before the yuan was devalued, Sinopec and Petrochina had already increased their diesel exports volumes in the third quarter," a China-based oil trader said, adding that the currency devaluation would encourage another jump in shipments.

China's refiners look set to more than double diesel exports in August to 900,000 tons from July, giving this month the highest monthly volume on record. "It is almost certain that quotas will be expanded for the rest of 2015," energy consultancy FGE said. "With sluggish (domestic) diesel demand and surging diesel stocks, the NDRC is under intense pressure to grant export quotas to additional refineries," FGE said.

China's National Development and Reform Commission (NDRC) is due to adjust export quotas for the rest of 2015 in late August.

Chinese refiners do most of their business in dollars, but labor costs are paid in yuan, making China's workforce more competitive against regional competitors such as South Korea. "It is predictable that Chinese refiners will increase sales into the regional diesel markets given the weaker yuan," said a source with a large South Korean refiner.

Another jump in China's exports would come just as Saudi Arabia - the world's top crude oil exporter - has stepped up diesel shipments from huge new refineries. The oversupply has pushed Asian diesel profit margins down by more than a third from February peaks, despite a rebound from lows hit in July.
The glut comes just as Asia's fuel demand slows. In particular, China's diesel use has been flat due to economic growth that has fallen to its slowest in decades and cut fuel consumption by trucks and machinery. With car sales falling fast as well, local demand is expected to take another hit.

China controls oil product exports through quotas issued to refiners after quarterly reviews. Refiners can apply for more allowances once initial quotas are used up.

56. Air Pollution Killing 4,000 in China a Day, US Study Finds

Air pollution is killing about 4,000 people in China a day, accounting for 1 in 6 premature deaths in the world's most populous country, a new study finds. Physicists at the University of California, Berkeley, calculated that about 1.6 million people in China die each year from heart, lung and stroke problems because of incredibly polluted air, especially small particles of haze. Earlier studies put the annual Chinese air pollution death toll at 1.2 million, but this is the first to use newly released Chinese air monitoring figures.

The study blamed emissions from the burning of coal, both for electricity and heating homes. The study, published in the journal PLOS One, uses real air measurements and then computer model calculations that estimate heart, lung and stroke deaths for different types of pollutants.

In its efforts to combat the problem, the Chinese government has set up a nationwide network of sensors, and regularly publishes data online. The Berkeley Earth researchers used this data for their report, along with data collected by a large international air quality-monitoring organization called AQICN.org. The researchers found that the data from the sensors painted a more alarming picture of pollution in Chinese air than previous satellite data had suggested.

Study lead author Robert Rohde said that 38 percent of the Chinese population lives in an area with a long-term air quality average that the U.S. Environmental Protection Agency calls "unhealthy." "It's a very big number," Rohde said. "It's a little hard to wrap your mind around the numbers. Some of the worst in China is to the southwest of Beijing."

To put Chinese air pollution in perspective, the most recent American Lung Association data shows that Madera, California, has the highest annual average for small particles in the United States. But 99.9 percent of the eastern half of China has a higher annual average for small particle haze than Madera, Rohde said. "In other words, nearly everyone in China experiences air that is worse for particulates than the worst air in the U.S.," Rohde said.

In a 2010 document, the EPA estimates that between 63,000 and 88,000 people die in the U.S. from air pollution. Other estimates range from 35,000 to 200,000.

Unlike the U.S., air pollution in China is worst in the winter because of burning of coal to heat homes and weather conditions that keeps dirty air closer to the ground, Rohde said. Beijing will host the 2022 Winter Olympics.

Outside scientists praised the research. Jason West at the University of North Carolina said he expects "it will be widely influential." Allen Robinson at Carnegie Mellon University said in an email that parts of the United States, like Pittsburgh, used to have almost as bad air but have become much cleaner "through tough regulations combined with large collapse of heavy industry (it moved to Asia)."
As China starts to clean up its air, limiting coal use, it will also reduce emissions of carbon dioxide, the chief global warming gas, Rohde said.

The sensors used in the study measure several types of pollution in China: ozone, carbon dioxide, nitrogen oxides and others. One of the most dangerous pollutants is PM$_{2.5}$, which stands for particulate matter that is smaller than 2.5 microns in diameter. These small particles can enter deep into the human respiratory system, and are associated with a range of harmful or even deadly diseases.

"When I was last in Beijing, pollution was at the hazardous level; every hour of exposure reduced my life expectancy by 20 minutes," said Richard Muller, scientific director of Berkeley Earth and one of the paper's coauthors, in a press release. "It's as if every man, women and child smoked 1.5 cigarettes each hour."

Indeed, Chinese pollution has become such a problem, it has actually become an unexpected moneymaker for some large companies. Facemasks in particular have become a good business for companies such as 3M, as CNBC has previously reported. Even the AQICN.org website has a special section called "Feel tired with the pollution: Get a mask!" On it, the group lists several brands, including two 3M models.

Other models listed are colorful or patterned with designs—such as those from Respro, Vogmask or Cambridge, mirroring the increasing attention even fashion designers are giving to face masks.

57. Cars a Threat to China's 2030 CO2 Peak

China's much-vaunted 2030 peak in CO2 could be thwarted by a threefold increase in the number of vehicles on the country's roads, explains energy and climate expert Bo Zheng, a researcher at the School of Environment of Tsinghua University based on a recent study1.

The central government is placing great emphasis on capping emissions of coal, but much less attention is put on cutting oil consumption, which is expected to rise sharply. As a consequence, the authorities will need to deliver a much tougher and closely coordinated strategy to curb vehicle use. Without these measures China's oil demand might almost double by the end of the next decade. (BP's energy outlook estimates growth to 17.5 million barrels per day by 2030 from 8 million b/d currently).

In the absence of much tougher policies, according to Bo's projections total vehicle numbers rise to 500 million by the end of the next decade, more than triple the current amount. That increase in vehicles and oil consumption would almost double the volume of CO2 emissions from the transport sector, offsetting many of the cuts (from business-as-usual levels) delivered by a reduction in coal use in power generation and industrial sectors.

They estimate that carbon emissions from the road transport sector will rise by 80% to around 1.3 billion tons of CO2e by 2030 from an estimated 730 million tons of CO2e in 2014 (compared with an estimated total CO2 emissions of around 10 billion tons last year). This rise could be big

1. "How will greenhouse gas emissions from motor vehicles be constrained in China around 2030?", Bo Zheng, Qiang Zhang, Jens Borken-Kleefeld, Hong Huo, Dabo Guan, Zbigniew Klimont, Glen P. Peters, Kebin He, Applied Energy, October 2015
enough to delay an overall carbon dioxide peak beyond the 2030 date outlined by China’s government.

Growth in GHGs from vehicles far outstrips any other sector, as emissions from cars and trucks grew by an average of 8.7% a year in recent decades. Growth in CO2 emissions in China has been partly driven by the explosion of vehicle sales and the increased length of journeys, which have totally offset the efforts by measures such as tighter fuel economy standards.

Cars contribute 90% to the total vehicle growth with a six fold increase due to higher incomes and rising travel demand. The number of trucks on the road is predicted to double given forecast growth for freight, which could increase by almost 2.5 times by 2030.

Improvements in the efficiency of cars can only curb activity growth in less than a quarter of provinces, including megacities such as Shanghai and Beijing. These areas have constrained emissions because their vehicle numbers have approached saturation point, and growth in the number of journeys, and length of journeys, is slowing.

But outside these areas, growth in vehicle activity will rise sharply, particularly in fast-growing southern provinces of Jiangxi, Sichuan and Jiangsu. The vast numbers of new cars and trucks in these areas will dominate the growth of vehicle greenhouse gas (GHG) emissions in the next 15 years and will require much tougher policies from government.

The implemented measures to cut vehicle GHG emissions can be broadly divided into two categories: Those that reduce activity in vehicle use and improve fuel efficiency.

The Chinese government has settled on these two approaches because they have the additional benefit of curbing particulate pollution that has become such a major problem in many of the country’s cities. In particular, China is focusing on the following: rapid growth of mass transit systems; updating fuel economy standards closer to developed country levels; improved market penetration of electric vehicles; and an increase in the proportion of biofuel blends.

On paper, the most effective policy would be to update fuel economy standards. The thinking is that if China could improve its fleet average fuel economy to reach the world’s most stringent levels (which are typically found in EU and Japan) in 2030, CO2 from vehicles could be constrained and peaked successfully. However, the current fuel economy in China is about 10%-40% worse than Japan and Europe, and fuel consumption limitations for buses and trucks, the two largest diesel users in China, lag about ten years behind cars.

So it is overoptimistic to assume that China can make big and swift improvements in fuel economy, given various constraints in China. For instance, bus and truck manufacturers in China lack the required motivation to improve fuel economies due to absence of incentives.

Worse still, the growing traffic jams in cities result in additional travel times and vehicle-idling emissions. No other single policy besides tougher fuel standards can peak emissions from road transportation.

Given these constraints, the most appropriate option is for China is to implement an integrated package of policies. It is important to combine fuel consumption limits at the national level along with curbs on car use at a local level, which is a useful method to constrain CO2 emissions in rapidly urbanizing areas in southern China.
According to this assessment, an effective policy package could be designed as follows: reductions in car use by 25% in urban areas; improvements in fuel economy by 25% for both cars and trucks in 2030 compared with 2020; and a much more vigorous promotion of electric vehicles and biofuels. The stringent new package policies would allow China to peak GHG emissions from road transport sector around the end of the next decade, helping the country reach the zenith of energy-related GHGs by 2030.

58. Mayors Try To Improve Air Quality Following Summons to Beijing

In China, “APEC blue” was the sarcastic term used to refer to the unusually clear skies Beijing enjoyed when an Asia-Pacific leaders’ summit was in progress late last year. A similar phenomenon is now being seen in smaller Chinese cities, as mayors are summoned to the Ministry of Environmental Protection (MEP) for ‘chats’, resulting in sudden improvements in air quality.

Mayors or their deputies from around ten cities have been ordered to Beijing to explain to environment ministry officials why levels of air pollution have remained so bad.

With demands for swift and decisive action ringing in their ears, municipal leaders have responded by ordering drastic measures, such as tough curbs on sectors including vehicle use, construction and the burning of coal, all of which produce tiny particulate matter deemed extremely harmful to human health.

The Henan city of Zhengzhou saw a miraculous improvement in July, after suffering awful air quality for the first half of the year. Over three weeks ago, air quality reached a ‘good’ level, and almost vaulted the city into the ‘excellent’ category. In Zhengzhou’s case, an improvement took root before the meeting with the Ministry of Environmental Protection and Ma Yi, the city’s mayor, also in the final week of July. Residents of the Henan city poked fun at the timing of the improvement, referring to it as ‘chatting blue’. Zhengzhou environment officials said curbs on a range of emitting sectors including cars, construction and coal had played a large part, but acknowledged that the better air quality typically seen in July and August had also been a factor.

But the MEP has demanded that tough measures are taken over the longer term, and asked Zhengzhou to prepare and submit a plan on how it will address the problems. Central government may suspend approval of new factories and buildings if the city does not show some progress in six months.

In the first half of the year Zhengzhou’s air quality ranked 71 out of 74 cities in a government survey, bringing it under closer scrutiny of an increasingly empowered MEP.

Other cities are experiencing bluer skies after the dreaded summons to Beijing. Against the backdrop of China’s National People’s Congress in March, Zhang Shuping, the mayor of Linyi in Shandong province, was obliged to take drastic measures against pollution after a meeting with the central government. Upon Zhang’s return, 412 factories ordered to clean up their operations, 57 forced to close down while changes were made, while small, antiquated operations with little hope of improvement shut down for good.

The “Linyi model" became a fevered topic of debate in policy circles. Some local officials and industry bosses complained that shutting down polluting factories would harm the city’s economy and throw many workers onto the unemployment scrapheap. But the majority of Linyi’s environmental officials and members of the public appeared supportive.
Since March, around 20 company bosses and mayors have endured a ‘walk of shame’ to appear for meetings with the MEP, after which officials in city administrations have been warned, formally-criticized or even fired in a bid by city bosses to deliver rapid improvements.

After the mayor of Ma’anshan in Anhui province was ordered to Beijing, four senior cadres in the city who failed to pull their weight on environmental issues were demoted, and one deputy county head had a serious offence added to his official record.

Despite the seriousness that a summoning to Beijing entails, some commentators feel the measures haven’t gone far enough and that a wider pool of high-ranking officials should explain poor pollution figures to the central government.

Cadres being groomed for the post deputy provincial governor should be ordered to attend, as well as city Communist Party secretaries, a move that could spur tougher action and help prevent chronic pollution levels from reoccurring, said Chang Jiwen, deputy head of the Resources and Environment Policy Institute, part of the State Council’s Development Research Centre.

Preventing air quality from creeping back towards the woeful levels seen earlier this year is likely to be one of the major remits of the MEP’s harder focus on prefecture level cities. The central government will be mindful of the short-lived nature of improved air quality in Beijing around the time of the 2008 Olympic Games, after which many curbs on polluters were lifted and heavy industries in neighboring provinces cranked up output, contributing to off-the-scale smog levels.

59. Research Report on Environmental Protection Industry in China Released

The proportion of investment in environmental protection remains low in GDP though the amount keeps increasing in recent years. The amount of investment is expected to grow significantly after 2014. Fog and haze remain the serious problems though the indices of sulfur dioxide and oxides of nitrogen decline in waste gas treatment in China. China reinforced the waste gas treatment to an unprecedented level in 2013. The industry chain of denitrification will benefit as the denitrification construction reaches a new high in 2014. Sewage treatment industry will enjoy new development opportunities based on industrial features and policy focuses as policies are launched in 2014.

Chinese government issues a series of policies to support the development of environmental protection industry in recent years. The industry of energy conservation and environmental protection will further develop due to the supportive policies in 2014-2018.

The waste gas treatment begins to take effect in China in recent years. The discharge amount of sulfur dioxide was 21.17 million tons in 2012, down by 4.52% YOY. Although it exhibits downward trend, the number is twice of the environment capacity and far higher than those in U.S. (10.36 million tons) and 27 European Union countries (5.68 million tons). The discharge amount of oxides of nitrogen declined from 24.04 million tons in 2011 to 23.38 million tons by 2.77%, including 70.93% of industrial emission and 27.38% of vehicle emission.

The State Council of China issued the Plan of Air Pollution Treatment on September 10, 2013. The Ministry of Environmental Protection of China signed the Letter of Responsibility for Air Pollution Prevention and Control with 6 local governments, including Beijing, Tianjin and Hebei, and issued Implementation Rules of Air Pollution Prevention in Beijing, Tianjin, Hebei and the Surrounding Areas. Meanwhile, the Ministry of Finance of China invested CNY 5 billion to support the air pollution treatment in Beijing, Tianjin, Hebei and the surrounding areas. Implementation
rules were issued by local governments, including the Key Missions of Clean Air Action Plan in Beijing in 2013-2017 published in September 2013, the 183 measures included in the Clean Air Action Plan in Shanghai published in October 2013, and the official implementation of Clean Air Action Plan in Tianjin in late October. The amendment draft of the Environmental Law mentioned to increase the financial investment in environmental protection. The Clean Air Act subject to air pollution is expected to be launched soon.

The policies on air pollution treatment provide financial support and reinforce the punishment for illegal actions. The fields related to waste gas treatment enjoy great development opportunities due to the supportive policies in China in 2014.

60. Vehicle Emissions Standard Roadmap In India Becomes Clearer?

BS IV Compliant Four Wheelers Mandatory from April 1, 2017 All Over Country

The Ministry of Road Transport and Highways has issued a notification that only Bharat Stage IV (BS-IV) compliant four wheeler vehicles will be manufactured on and from April 1, 2017 over the country. However, in some states the Mass Emission Standards for Bharat Stage IV shall come into force from October 1, 2015 and in the rest from April 1, 2016.

BS IV grade fuel has already been made available in the NCR and the cities of Mumbai, Kolkatta, Chennai, Ahmadabad, Bangalore, Hyderabad including Secunderabad, Kanpur, Pune, Surat, Agra, Lucknow and Sholapur with effect from April 1, 2010 and 20 additional cities were added from October, 2014 and 30 more cities from April 1, 2015 were added.

With this only those newly manufactured four-wheeled vehicles, which are complaint with the BS-IV standards will be allowed to registered and move on roads with effect from the notified dates in the notified areas. This has been made possible due to the supply of BS-IV complaint petroleum fuels in these areas.
These specifications will further reduce the emissions of Carbon Mono-oxide (CO), Hydrocarbon (HC), Oxides of Nitrogen (NOx) and Sulphur (SOx) which are much less in BS-IV fuel as compared to BS III fuel.

**Government Not To Skip BS V Emission Norms**

Clearing the air on the implementation of emission norms, Vijay Chhibber, Secretary, Ministry of Road Transport & Highways MoRTH) today said that the government will not skip BS V and jump to BS VI but will go in a phased manner. "BS-V will be implemented by 2019 while BS-VI will come into force by 2023," said Vijay Chhibber.

Welcoming the move, Anant J Talaulicar, Chairman, SIAM Diesel Image Group and Chairman & Managing Director, Cummins India said, "This is the logical way and beneficial for all the stake holders of the industry. However, this is going to be challenging for the industry to achieve it."

According to report of the expert committee, Government of India, the investment by automotive industry for transitioning from BS IV to BS V would be to the tune of Rs 50,000 crore\(^2\). While as per the estimates of the same report, to produce BSIV/BSV diesel from refineries would require an investment of about Rs 60,000 crore.

SIAM, apex body representing automobiles manufacturers have been pushing for quite some time not to skip the emission norms. Talaulicar said that while there is no doubt that one needs to go to BS VI norms, one should keep in mind the market and tech realities. Such a shift by India, the world’s biggest greenhouse gas emitter after the US and China, is also expected to strengthen the country’s standing at global climate change negotiations that culminate in a summit in Paris in December.

Putting across the industry viewpoint, Abhay Firodia, chairman, Force Motors Ltd, said: "Merely having fuel doesn’t enable you to get there."

Bosch Ltd, India’s largest manufacturer of fuel-injection systems and engine technologies, had told the center that such a switch could lead to safety and quality problems such as self-acceleration and engine damage.

**However, Minister Gadkari Would Like Auto Industry to Go Straight To BS-VI Standard**

One day after the Secretary’s announcement, Road Transport Minister Nitin Gadkari asked automobile manufacturers to leapfrog from BS-IV to BS-VI to reduce vehicular pollution. Gadkari’s appeal comes at a time when green activists are pushing this demand following the recent National Green Tribunal order on high level of air pollution in Delhi.

The minister said industry may have some difficulty doing this but there was scope to turn the "challenge into an opportunity". "Manufactures are now seeking time for 4-5 years. Manufacturers, as early as possible, should go to the mark of Euro-5 and Euro-6 (read BS-V and BS-VI) and I suggest they could go for Euro-6 directly," he said.

Gadkari also asked automobile manufacturers to shift focus from manufacturing diesel-fueled vehicles to those running on cleaner fuels such as bio-diesel, bio-CNG, hybrid and electricity. He

\(^2\) 10 million
added his ministry would do more for such vehicles than for diesel-run ones that are more polluting. The minister said shifting dependence on diesel for transport will help the country save huge foreign exchange. According to estimates, over 80% of the country's total diesel consumption is for transportation.

Previously, road transport secretary Vijay Chhibber had asked the automobile industry to be sensitive towards environment and safety issues rather than thinking about their "profitability only".

Gadkari has said his ministry plans to set up 2,000 centers for fitness and pollution tests across the country on public private partnership mode. The ministry has submitted this to NGT as part of proposals to curb vehicular pollution.

New Department for Transportation on the Anvil

Government plans to set up a separate department for transportation within Ministry of Road Transport & Highways, to address the regulations and issues related to vehicular transportation.

"So far, MoRTH has been excessively focusing on the civil works especially on the road construction and now we have started focusing on transportation. We are considering to a separate department to address the issue of transportation." said Chhibber.

“My ministry is a little extensively fond of civil engineering of road construction than other aspects," Chhibber said. “We have underestimated the potential of transport. Therefore, we are carving out a separate department for transport so that we can come up with a road map for the transport sector. It is still at a thought stage and very soon we should have a resonance on this.”

The new department under will communicate with all the stake holders in the industry and help in facilitating better automobile legislation.

SIA M Warns Of Safety Issues If BS V Emission Norms Skipped

According to Society of Indian Automobile Manufacturers (SIAM), the danger of compressing the timeframes is "the risk of putting an inadequately validated technology on the Indian roads, which will lead to safety issues in vehicles like un-intended acceleration or fires" if the process is not adequately tested.

Auto industry body SIAM on Monday cautioned that moving directly to Bharat Stage (BS) VI emission norms, skipping BS V, could lead to major safety compromises in vehicles that could put life of consumers at risk, amid speculation that the government is planning such a move.

According to Society of Indian Automobile Manufacturers (SIAM), the danger of compressing the timeframes is "the risk of putting an inadequately validated technology on the Indian roads, which will lead to safety issues in vehicles like un-intended acceleration or fires" if the process is not adequately tested.
"Vehicles have to operate as a complete system and emission technologies have a close linkage with safety as well as fuel efficiency parameters both of which are covered by other mandatory regulations of government," SIAM President Vikram Kirloskar said in a statement.

"The risk of putting an inadequately validated technology on the Indian roads, will lead to safety issues like un-intended acceleration or fires which may arise due to improper regeneration of the particulate trap, if the process is not adequately tested and validated, it could put the life of the consumer at risk,"

According to the industry body, while the BS V and BS VI fuels are basically the same, the vehicular technologies are vastly different and have to be sequentially developed, tested and validated with each stage taking 4 to 4.5 years.

"That is also the reason why other countries have first implemented the Euro V norm and moved to Euro VI only after proper validation and stabilization of the Euro V technologies, while the fuel was already available," it said. Currently, 33 cities in India follow BS-IV norms on cars while the rest are on BS III.

Under the national auto fuel policy, BS-IV standards are to be adopted across the country by 2017 and BS V by 2020. BS VI was to be introduced in 2024. However, there has been speculation that the NDA government is considering advancing implementation of BS-VI fuel norms across India by skipping the BS V stage.

It further said: "In such unfortunate incidents, the people of India will ask the question why the auto industry has introduced a technology on the Indian roads without proper validation and does this not amount to negligence by the industry. Industry would have no defense and the liabilities on the industry would be huge. This is not an acceptable situation for the industry."

Keen to avoid such a situation, Kirloskar said: "...the auto industry and the global technology providers will never put any vehicle in the market without properly validating the safety, reliability and the regulatory conformance of the vehicle as a complete system. There is no room for shortcuts and knee-jerk reactions where safety is concerned."

Overall automotive market has an estimated value of Rs 5.56 lakh³ crore

The profile of the domestic automobile industry is changing, with Rs 5.56 lakh crore the estimated value of the automotive market. India's passenger vehicle market accounts for 51 percent and commercial vehicle segment 19 percent of the overall industry turnover. (see Figure below)

61. Govt's Scrappage Policy to Provide an Economic Boost to Auto Industry

The government recently announced it is ready to offer incentives to consumers to purchase new trucks and cars provided they are willing to scrap their old vehicles. The proposed policy is expected to eliminate high polluting vehicles, provide an economic boost to the auto industry, and kick start vehicle scrappage facilities.

Vehicle recycling and scrapping policy can effectively be implemented with public and private partnership.

³ 100,000
This (scrap age policy) should not be seen as a stimulus package for the industry. This is going to help the people at large as it will reduce the pollution. There is a huge volume accumulation of vehicles of road which is allowed to continue, this could be a major problem. The whole idea is not one time stimulus incentive to clear the system initially but to get it going ahead. Even in a country like Germany which is well established - such incentives are necessary, because people are held back by lethargy, inertia and sometime by lack of information. In Germany for instance in 2009, the number of vehicle retired went up from 0.4 million to 1.3 million as they brought a policy for this,” said, Capt. NS Mohan Ram, Chairman, Recycling Sub-Group, Society of Automobile Manufacturers (SIAM).

SIAM recommended that in the first phase India's eight largest cities should be covered and could see as many as 8.9 million passenger vehicles and 1.47 million commercial vehicles being scrapped.

The Industry body also pitched to the government that doing this will generate Rs.31,332 crore of revenue for the government through taxes in these eight cities. Recently, the proposal attracted opposition from road transport and highways ministry which recommended that fitness test results should be the basis for phase out and not the age.

According to a report by A. T. Kearney the number of vehicles coming for recycling between 2010-2020 will triple from three million to nine million, 80 percent of them being two-wheelers. United State also got cash for clunkers and got rid of 6.19 lakh vehicles.

He further adds “actually, it doesn't benefit the auto industry too much, it only just pre-pones purchases. Real gain is the environment, because, old, polluting, unsafe vehicles are off the roads and new vehicles coming in. Actual benefit of the auto industry is in terms of additional sales is not significant, what significant is reduction to emission and help public."
"In terms of policy, it is probably to have legislation that all vehicles should have yearly fitness regime as you find abroad. Unless the vehicle is not fit to ply on road, it should not be allowed to move on the roads in first place whether it is a commercial vehicle or a private vehicle," said Nitin R Gokarn, CEO, National Automotive Testing and R&D Infrastructure Project (NATRiP). He is also chairman of the government's committee on vehicle recycling.

The criteria, in terms of what constitutes the fitness- whether it has been safety mechanism, whether it has got the emission norms because PUC mechanism today as most observers agree is not robust enough to cater to the entire emission regulation therefore the measure should not go through the current PUC system.

Agreeing with him, Vishnu Mathur, Directory General, SIAM, said "I think there are three tiers of imperative that derives us, to look at something like fleet modernization policy. The first is certainly the environment. Indian cities and India as whole is known to have one of the worst ambient air qualities in the world. The second is the issue of safety; I think we also have an image of being highly unsafe country in terms of road accident etc. The third is the imperative of the energy conservation. If you look at all these three factors a one-time fleet modernization policy becomes an imperative for our country which doesn't hurt anybody else outside the country."

Industry body SIAM has been pushing for scrapping of vehicles manufactured before 1996, saying this would enable the entry of more eco-friendly vehicles on the road.

The issue was also discussed at length at Central Motor Vehicles Rules-Technical Standing Committee (CMVR-TSC) meeting recently. Besides government representatives, even some of the non-government members of the committee did not support SIAM's scappage proposal. They said while proposing the cut-off date, Siam had cited that pollution and emission norms came into force in India from 1996.

SIAM argues that the emission norms have been improved in the last 10 -15 years. The tendency of the Indian consumer is to continue using the vehicle far beyond its expected age. Due to which the vehicles which don't follow any emission norms as they were manufactured way back before this norm came into force, are still running on the Indian roads and entering into Indian cities which today has BS- IV emission norms.

Similarly these old vehicles are probably not well maintained and have frequent brake failures and other problems on the road and meets with accidents at highways and roads.
SIAM has proposed two different ageing criteria for commercial vehicles and privately owned vehicles. "Mainly from the prospective that privately owned vehicles would be better maintained than commercial vehicles. Also in terms of usage of commercial vehicle will do probably about a lakh\(^4\) of kilometer a year, while privately owned vehicle will do about 50 km in year." Mathur said. It proposes 15 years for commercial vehicles while 10 years for privately owned vehicles," said Mathur.

"Definitely, the inspection certification mechanism is the robust and ultimately the answer to most of these issues. What we are saying is that in 15 years because if a truck for example is doing one lakh km in a year then it has already done about 15 lakh kilometer; beyond that it is impossible to keep the vehicle in good shape. So during those 15 years the IMC mechanism should operate and provide a road worthiness certificate to come on the road every year. After this 15 year period, the vehicle should be asked to go off-road especially if it is not meeting any emission norms today. Even if the vehicle is very well maintained" Mathur explained.

"It's a combination of various things, one is to have a mechanism which is presently lacking in country. If you look at Ministry of Road Transport and Highways last five year plan, it had planned to put up ten inspection and certification centers in the country. But ten such centers will not suffice for the magnitude of the problem, just looking into throughput of the number of vehicles that ply on the Indian roads. In 2010 the number was calculated to be about 1000 of such certifications centers across the country. Now government will not be able to fund all this. So definitely there has to be private sector participation and their capital infused into it," said Nitin R Gokarn.

SIAM, Director General said that it would wise to take date of registration and not date of manufacturing while considering the scrappage of vehicle. Talking about multiple ownership of vehicles he added that it has to be seen how the incentive offered for scrapping the vehicle will go back to the initial owners.

Worldwide, such schemes, including the cash-for-clunkers plan of the US government, were rolled out in the aftermath of the 2008 financial crisis. In Europe, scrappage plans were in introduced in the 1990s.

62. Australia Unveils Emissions Reduction Target Ahead Of Paris Talks

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\(^4\) 100,000
Conservative Prime Minister Tony Abbott has announced cuts to Australia’s greenhouse gas emissions that were immediately criticized by environmental groups and opposition politicians for lagging behind other advanced economies. The world’s largest exporter of coal and iron ore will cut emissions by 26-28 percent of 2005 levels by 2030, Abbott said, a target that will be submitted as part of negotiations on a global climate deal in Paris at the end of the year. The government's independent expert body, the Climate Change Authority, said last month Australia needed to reduce emissions by 40 to 60 percent from 2000 levels by 2030 to meet an international agreement to limit global warming to two degrees Celsius over pre-industrial levels.

Australia is one of the largest carbon emitters on a per capita basis due to its reliance on coal-fired power plants, and critics say the move will do little to bring it in line with ambitious targets set by the United States and Europe.

Abbott is already facing criticism for his strong support for the coal industry and for scrapping an ambitious carbon tax and emissions trading plan last year. "We've got to reduce our emissions but we've got to reduce our emissions in ways which are consistent with continued strong growth," Abbott told reporters. "The last thing we want to do is strengthen the environment and at the same time damage our economy."

Australia is currently aiming to reduce emissions by 5 percent from 2000 levels by 2020.

Critics accused Abbott of gaming the system by choosing 2005 instead of 2000 for the new benchmark. 2005 was an historically high year for emissions.

Abbott said the new target puts Australia in line with pledges from the United States, the EU and Canada, but data compiled by the Climate Institute think tank puts Canberra's position below all three. Washington has pledged a 26-28 percent drop on 2005 levels by 2025, or about 41 percent by 2030, while Brussels has promised to deliver 40 percent of 1990 levels by 2030, or about 34 percent based on 2005 levels, it said.

The Australian Conservation Foundation (ACF) said the target was out of step with international consensus. "It's a defeatist target that shows no faith in the ability of Australians to adapt, innovate and make the transition to a clean economy," ACF head Kelly O'Shanassy said in a statement.

A poll released recently by the Climate Institute showed 63 percent of Australians wanted more action on climate change, up six percentage points from 2014. Australia's main opposition Labor Party has seized on the shift in public opinion, pledging last month to reinstate the emissions trading scheme and raise the level of energy generated by renewable sources to 50 percent by 2030.

AFRICA

63. Program to Test Vehicle Emissions Launched In Ghana

Mr. Mahama Ayariga (2nd left), the Minister of Environment, Science Technology and Innovations,
inspecting a Vehicular Emission Testing process in Accra. Those in the picture include Mr. Daniel Amlalo (left), the Executive Director of the EPA, and other officials.

The Environmental Protection Agency (EPA) has launched a program to test emissions from vehicles as part of measures to reduce air pollution in the country. The month-long nationwide pilot program is expected to collect data to the serve as a prelude to emission test becoming part of roadworthy test before vehicles can be registered.

Pursuant to its mandate, as set out in section 2 of the Environmental Protection Agency Act, 1994 (Act 490), the Environmental Protection Agency (EPA) has developed guidelines for motor emissions and is in the process of transforming the guidelines into standards.

The Motor Traffic and Transport Department (MTTD) of the Ghana Police Service will set up spots along designated roads in the regional capitals, where vehicles will be subjected to voluntary testing for levels of emissions. The program seeks to ensure that all motor vehicles and motorized equipment in the country and those imported are less pollutant or fall within acceptable emission standards.

In the near future, the test is expected to become mandatory, and vehicles that do not meet emission standards will not be issued with roadworthy certificates.

The emission of exhaust fumes from 'tired' vehicles on Accra roads and other highways across the country is a common occurrence. What is serious is that the fumes contain dangerous chemicals, including carbon monoxide and carbon dioxide. According to medical experts, carbon monoxide could have severe effects on the fetus of a pregnant woman exposed to it, leading to significant toxicity of the central nervous system and the heart.

The inhalation of carbon monoxide could lead to even death, while chronic exposure to low levels of it could lead to depression, confusion and memory loss.

Ghana’s effort to reduce vehicular emissions has, over the years, seen interventions, including the phasing out of leaded gasoline, procurement of crude oil with low sulphur content and restriction on age limit of vehicles imported into the country.

The Minister of Environment, Science, Technology and Innovations, Mr. Mahama Ayariga, observed that the level of vehicular pollution was an issue that bothered all. “We could stop all that if we reduce emission from our vehicles to the allowable standards by strengthening the enforcement systems,” the minister stated.

He said the problem had to do with the failure to put in place enforcement mechanisms and indicated that under the new program, there would be a deployment of infrastructure and the needed technology nationwide to monitor vehicle emissions to reduce its health implications.

The program he said, would be extended to cover vessels, ships, aircraft and plants of companies to ensure that the system comprehensively addressed air pollution in the country.

Mr. Ayariga further observed that when implemented, it would also reduce the importation of second-hand engines and promote the culture of vehicle maintenance. The minister said in the near future, owners of vehicles emitting such dangerous fumes would be fined.
The Executive Director of the EPA, Mr. Daniel Amlalo, said the agency was developing guidelines for motor emissions that would eventually be set as standards. He said the testing would initially be done free of charge during the trial period but, subsequently, fees would be charged as part of roadworthy certification.

Data generated from the trial testing program, apart from augmenting the vehicular emissions inventory in Ghana, will also serve as a useful guide in determining how realistic the motor emission standards are.

Apex Pollution Control Company Limited (Apex-PCCL), the Ghana Standards Authority (GSA), National Petroleum Authority (NPA), Motor Traffic and Transport Department (MTTD), National Road Safety Commission (NRSC), Driver and Vehicle Licensing Authority (DVLA) and the Ghana Private Road Transport Union (GPRTU) are collaborating with EPA in the trial tests.

Mr. Amlalo noted that the non-existence of standards to control vehicular emissions would lead to continued and increased emission pollution from vehicles with accompanying adverse consequences for human health and the environment.

In his address, Mr. Ayariga, Minister for the Environment, Science, Technology and Innovation, said government had taken measures to reduce vehicle emissions and its impact on health through policy interventions such as phasing out of leaded gasoline, restrictions on age limit of vehicles imported into the country, deregulation of fuel importation in order that oil companies import high quality fuel, procurement of crude oil with low Sulphur content and mainstreaming of environmental issues by ensuring that Strategic Environmental Assessments (SEAs) are undertaken for all transport sector policies, plans and programs.

Hon. Ayariga said to ensure that emission pollution was controlled and reduced, government, in collaboration with the private sector, would be introducing the emission testing of vehicles to go beyond the existing inspection regime which focused largely on the examination of the physical condition of vehicles.

He said a sub-component program on vehicular emissions formed part of the evolving capacity-building program of EPA to ensure sound management of the environment and, in part, respond to Ghana's commitment under the United Nations Framework Convention on Climate Change (UNFCCC).

The Motor Emissions Trial Testing Program launch took place on the theme: 'Clean Air for a Healthy Life'.

SOUTH AMERICA

64. Chile Proposes Santiago Vehicle Restrictions and Euro VI Standards

Chile's Ministry of the Environment has proposed imposing tighter restrictions on vehicle use, a permanent ban on heating or cooking with firewood, and higher standards for emissions from industrial sources in a new decontamination plan for the country's capital, Santiago. In a presentation at the Santiago regional government on July 21st, Environment Minister Pablo Badenier said additional measures are required following the declaration of the Metropolitan Region as a saturated zone for levels of breathable particulate material.

The proposals include:
• restricting the use of motor vehicles during winter months, from May to August;
• banning the use of firewood for domestic heating and cooking in the region;
• imposing Euro VI emissions standards for light- and medium-duty vehicles and buses beginning in 2017;
• restricting the use of trucks that fail to meet emissions standards;
• cutting emissions of particulate material from industry by nearly 75 percent;
• speeding the renewal of sewage treatment plants to reduce emissions of ammonia; and
• halting operations of the largest polluters during critical episodes.

The government plans to publish a draft version of the new decontamination plan in November, which then will be available for public consultation through next March.

Regional government head Claudio Orrego highlighted the need to permanently restrict the use of vehicles throughout the winter period “to avoid the accumulation of concentrations of particulate material.” The government now can ban the use of only 20 percent of vehicles fitted with catalytic convertors when air quality reaches harmful levels. The new plan will put a special focus on heavy vehicles, especially trucks, which are not subject to the restrictions.

Orrego said the government also will increase the number of inspectors to ensure that the ban on burning firewood is followed.

MIDDLE EAST

65. Israel Committee Urges 30 Percent Emission Cuts

Israel should commit to reducing its greenhouse gas emissions by 30 percent by 2030 before the end-of-year United Nations climate summit in Paris, an interministerial committee is recommending to the government. Such a reduction, from projections in a “business-as-usual” scenario, also would save the Israeli economy 125 billion shekels ($33.2 billion), mainly in lower energy and health costs, said the committee headed by the Environmental Protection Ministry.

But the proposal, released July 14th at a Tel Aviv conference on Innovation & Sustainability, did not include cost estimates or an operating plan, and there was no indication of how big a role the recommendations would play in the government's ultimate target.

The Israeli government is expected to make a formal emissions reduction commitment to the United Nations in the coming months, ahead of the global climate talks in December.

The interministerial committee identified more than 130 possible ways for Israel to reduce carbon emissions, mainly by cutting energy demand and increasing supply from renewable sources. By combining the measures, it said, a “conservative” target would be to aim to produce 22 percent of Israel’s energy from renewables by 2030, and reduce its carbon emissions by 28 percent. A more “ambitious, but attainable” target, the committee said, would be to increase renewables by 35 percent and reduce emissions by 32 percent.

To reach either target, the report said the government should require all power plants to burn gas instead of coal, add the costs of pollution to the price of fossil fuels, create a national fund for energy efficiency and increase electricity rates to encourage savings.
It also recommended adopting mandatory standards for green building and better public transportation and creating a “single body with overall responsibility and sufficient authority to supervise, monitor and enforce the plan's implementation.”

Over the Environmental Protection minister's objection, National Economic Council head Eugene Kandel said that body should be very small—“only three to four members”—and should include a representative of the private sector.

Nir Kantor, chemical, pharmaceutical and environmental director at the Israel Manufacturers Association, said, “We need to know how you plan to implement the program, with a long-term commitment to policy and funding. If you really intend to do it this time, then show us.”

The Finance Ministry's representative to the process, Snir Niv, objected to the plan, saying while his ministry “supports the need, we don't agree with the targets here” and “do not believe the return on all forms of investment are equally good for the Israeli economy.”

If the plan is adopted, then Israel's emissions in 2030 would total 74 million to 78 million tons—or 30 million to 34 million tons less than if no action is taken, said Gil Proactor, the Environment Ministry's senior climate change coordinator. That per capita level of emissions would keep Israel in line in other developed countries, he said. But if no policy changes are made, then Israel's carbon emissions would rise 32 percent by 2030, to 108 million tons a year, according to the report.

The UN Framework Convention on Climate Change has become “almost like a beauty pageant,” said Naor Yerushalmi, executive director of Life & Environment, an umbrella organization of Israeli environmental NGOs, with “every country trying to show that it is the best in the business of reducing GHG emissions. … But Israel isn't even in the running.”

Yerushalmi noted that the government did not honor President Shimon Peres's commitment in 2009 to reduce emissions by 20 percent by 2020. It also cut funding to subsequent programs to reduce greenhouse gas emissions and promote the development of cleaner fuel alternatives.

But international delegates to the event expressed confidence in Israel's ability to keep up with international targets. “We believe Israel will succeed, and without stopping growth, just like Germany did,” said Barbara Hendricks, German Minister for the Environment, Nature Conservation, Building and Nuclear Safety, the conference’s co-sponsor. Climate action is “an important driver for the national economy, especially in a technologically advanced country like Israel, “she added.

**66. Saudi Arabia Floods Market with Ultra Low Sulfur Diesel**

Saudi Arabia, the world's top crude oil exporter, has turned itself into a major refined-fuels power, offering customers millions of barrels of diesel and potentially triggering a price war with Asian competitors as its exports feed into a glut.

Saudi Arabia, a leading member in the Organization of Petroleum Exporting Countries, had pledged last November to keep crude output high to defend its market share against higher-cost producers. While the strategy has kept crude markets well-supplied and prices low, the kingdom has had mixed success in defending its market share as global production remains high despite low prices.
Saudi Arabia’s massive refineries are now processing more of its crude at home, moving the country into a tie with Royal Dutch Shell as the world’s fourth-largest refiner and enabling it to export more fuel products than ever before.

Aramco Trading Co, a subsidiary of state oil company Saudi Aramco, offered via tenders 2.8 million barrels of ultra-low sulfur diesel for loading in late July to early August, trade sources said, enough to meet Japanese demand for three and a half days. The unusually large volume of offers is likely to add to exports that last year surged to peaks of more than 300,000 barrels per day (bpd), up from next to nothing in 2010, according to data from the Joint Oil Data Initiative.

“We are already seeing the impact in the Asia-Pacific,” said Suresh Sivanandam, principal analyst for refining and chemicals at Wood Mackenzie. “This year there is not a single drop of diesel exported from Singapore to the Middle East,” he added, referring to a once popular diesel export route.

The Saudi exports, mainly ultra-low sulfur diesel destined for Europe, put it in direct competition with big Asian diesel exporters India and South Korea and reduces Asia’s gasoil margin to the lowest in five years.

Saudi Arabia opened its newest 400,000-barrels per day refinery in Yanbu in April, reaching full capacity within two months. “Yanbu has become a distillates monster,” a shipbroker said, referring to increased exports from the city.

At least seven long-range vessels have been provisionally booked to load diesel from Yanbu headed for Europe, shipping fixtures showed. One of them is the 120,000-tonne Suezmax tanker Atina, carrying diesel to Europe, an unusually big ship to transport the fuel that showcases the scale of the new Saudi operations.

Exports from the Gulf are expected to rise further as demand in the area falls at the end of summer when power generation drops.

GENERAL

67. Shippers Claim They Can Cut Emissions Voluntarily

Despite projections from the United Nations that greenhouse gas emissions from ships could more than double by midcentury, the head of the World Shipping Council claims that changes in shipbuilding technology and the fuels used to move goods across the world’s oceans could lead to a drop in overall emissions. “A 20 percent reduction is achievable unless there is a huge spike in the amount of cargo that would need to be carried,” Chris Koch, president and chief executive officer of the World Shipping Council, told reporters in a recent interview, rejecting calls from some for global regulation of shipping emissions.

His statements contradict a push from the United Nation’s International Maritime Organization to deal with the potential for quickly rising emissions from shipping. Last October, the IMO warned that without major policy changes, emissions from shipping could increase over 2012 figures by between 50 percent and 250 percent by 2050.

But according to Koch, whose group represents the majority of global liner ship capacity, shippers can curb emissions without a global mandate. He said the sector is meeting the IMO’s new fuel efficiency and vessel design standards to curb greenhouse gases.
But not everyone agrees that shippers can or will address rising emissions without regulation. On April 28, the European Parliament approved a draft regulation under which companies operating vessels more than 5,000 gross tons that dock at European Union ports must report their carbon dioxide emissions to the European Commission beginning in 2018.

“If nothing is done, shipping emissions will go up by about 50 percent by 2030,” said Jose Inacio Faria, a Portuguese Liberal lawmaker who prepared the European Parliament’s position on the draft regulation. Shipping is responsible for about 4 percent of EU greenhouse gas emissions.

IMO spokeswoman Natasha Brown said it was premature to say whether the industry can cut greenhouse gases without a global mandate. But IMO members—led by the low-lying Marshall Islands, which could be swamped by rising sea levels—brought up the idea of such a measure at the IMO's Marine Environment Protection Committee meeting in May.

There also has been a push from some quarters to include mention of aviation and shipping emissions in a global climate pact the UN will attempt to forge in Paris late this year.

Koch said new and larger ship designs—notably those featured in Maersk's new Triple E class—emit 20 percent to 50 percent less carbon dioxide per container carried. The effects are achieved through a “boxy,” U-shape hull, smaller engines with fewer revolutions and waste heat recovery to boost vessel propulsion, Maersk claims.

Eighty-eight of these 400-meter-long vessels are expected to be in service in two to three years, hauling 18,000 to 21,000 twenty-foot equivalent units (TEUs), Koch said. About 20 are in operation. Maersk has engaged Korea's Daewoo for the job, while CMA GGM has retained competitor Hyundai.

To curb sulfur and nitrogen oxide emissions, the IMO has mandated ships to cut sulfur in fuel to 0.5 percent from 4.5 percent starting in 2020. The move comes on top of provisions starting in January capping sulfur to 0.1 percent from 1.5 percent in so-called emission control areas, located 200 miles off most North American coasts, the North and Baltic seas, and the Caribbean.

Koch said the requirement “will be the most expensive environmental regulation our industry has ever faced,” adding shippers will have to spend $75 billion annually to adapt. “It will increase fuel prices by $300 a ton, but will help reduce emissions further” as rising fuel costs encourages ships to cut speeds.

Liquefied natural gas is being increasingly used as a more environmentally friendly alternative, especially in U.S. emission control areas. A lack of transport and delivery infrastructure is threatening future uptake, however.

“Ports are not set up to provide LNG services like for oil so building infrastructure is an issue,” Koch said, likening the gap to the “chicken-and-egg” dilemma. “The LNG industry won't invest in infrastructure until there are enough ships to buy the fuel and the shipping industry won't invest until there is enough fuel available,” he said. Investors willing to strike innovative financing arrangements are needed to help solve the problem, Koch added.

John Kaltenstein of Friends of the Earth said much of the industry's recent carbon dioxide reductions come from slow steaming to trim fuel costs in a recessionary environment, and once economic activity picks up, speeds and cargo volumes will increase. “We need deep and
meaningful reductions by 2050, which are unlikely to come without a global binding target," Kaltenstein told reporters.

Kaltenstein hopes the Paris summit will bring additional scrutiny to the shipping and aviation industries, which he said has been insufficient. He added shippers should take cue from Maersk's ambitious green agenda.

John Kornerup, a risk management director at the Danish carrier's sustainability division, said Maersk has completed 40 percent of its goal to cut its carbon dioxide emissions by 200 million tons by 2020 compared to its 2007 levels. The gains stem from better network optimization and planning, slow steaming, technical waste heat recovery and a variety of ship design improvements, Kornerup said, adding the company saved $760 million in 2013 from emissions reductions.

He said the industry can cut carbon dioxide emissions 50 percent by 2050. “It's doable,” he told reporters, adding that Maersk also is encouraging customers with eco-friendly plans to join the initiative to cut their carbon footprint. These include Wal-Mart, U.K. supermarket chain Tesco and other corporates keen to reduce supply-chain pollution.

The Clean Shipping Index also hopes to do that, director Sara Skold told reporters, adding that shippers must quickly hammer out an emissions inventory (the IMO is working to do this in the near term) and measuring standard to help populate data businesses can use to gauge freighters' environmental profile. The standard should move beyond measuring carbon and include sulfur, nitrogen oxides and other harmful pollutants and chemicals. “Where are emissions coming from?” Skold asked. “It's not just fuel tankers and cargo carriers. There are so many variables to look at.”

Countries also could consider issuing alternative fuel tax breaks to help drive transition into distillates and LNG, as well as other market-based incentives beyond cap-and-trade mechanisms under review.

Skold said the Clean Shipping Index allows clients such as Basf, H&M, Philips, Volvo and Volkswagen to choose the greenest shippers. “We are trying to create a market for green shipping,” she said. “By reporting their emissions [reduction] information to us, the highest ranked shippers get the highest rates.”

68. Low Oil Prices, Clean Energy Advances Offer World Opening on Climate

A unique confluence of global events—from volatile oil prices to unforeseen technological advances and declining prices in renewable energy—has created a window of opportunity for significant worldwide progress on climate change, the Global Commission on the Economy & the Climate said in a July 7th report. Those changes, along with incremental growth in carbon pricing both at the national and subnational levels, “offer new opportunities to accelerate the transition to low-carbon growth and prosperity,” said the report, “Seizing the Global Opportunity: Partnerships for Better Growth & a Better Climate.”

The commission was launched by seven nations: Colombia, Ethiopia, Indonesia, Norway, South Korea, Sweden and the U.K., and is co-chaired by former Mexican President Felipe Calderón and economist Lord Nicholas Stern.
Carbon pricing—either through emissions trading systems as in the European Union or through taxes on the carbon content of fossil fuel—has been adopted or is planned in about 40 countries and more than 20 subnational jurisdictions, the report said.

“Momentum is already building—technological innovation, new economic trends and political commitments are all coming together—toward a low-carbon future,” the report said. “But the pace of change needs to be accelerated to stimulate further and better quality growth and reduce climate risks.”

In the past two years, the report said, 28 countries have launched efforts to reform fossil fuel subsidies, a push aided by lower global oil prices that has softened consumer opposition to their elimination.

The report focuses on emerging trends as well as policies that may be more politically palatable than in the past to allow developed and developing nations to make a quicker transition to low-carbon development.

They range from declining oil prices—which the report said should make it more politically viable to reduce or eliminate fossil fuel subsidies—to “heightened awareness of climate risks” in the financial sector and progress in reducing the carbon intensity of the global economy.

The report highlights 10 policy changes that if implemented could keep global temperatures from increasing more than 2 degrees Celsius (3.6 degrees Fahrenheit) above pre-industrial levels. Keeping temperatures below that threshold is a key goal for international negotiators as they head into year-end talks in Paris toward a global climate accord, although the agreement alone is not expected to be sufficient to meet that goal.

Those 10 policies would include a focus on the “three key economic systems” where economic growth and greenhouse gas emissions are concentrated, the report said: cities, land use and energy. They also would have to address three key drivers of growth, from resource efficiency to infrastructure investment and innovation, and require significant action toward low-carbon development businesses and investors.

The Commission makes the following recommendations:

- 1 Accelerate low-carbon development in the world’s cities
- 2 Restore and protect agricultural and forest landscapes and increase agricultural productivity
- 3 Invest at least US$1 trillion a year in clean energy
- 4 Raise energy efficiency standards to the global best for appliances, lighting, vehicles, buildings and industrial equipment
- 5 Implement effective carbon pricing
- 6 Ensure new infrastructure is climate-smart
- 7 Galvanize low-carbon innovation
- 8 Drive low-carbon growth through business and investor action
- 9 Raise ambition to reduce international aviation and maritime emissions
- 10 Phase down the use of hydrofluorocarbons (HFCs)
“Together, it is estimated that these [actions] could achieve at least 59% and potentially as much as 96% of the emissions reductions needed by 2030 to keep global warming under 2C,” the report said.

69. 2014 World’s Warmest Year, Scientists Say

Scientists said 2014 was the warmest year on record, but surface temperatures aren't the only sign of a changing climate.

- Greenhouse gases, including carbon dioxide, hit record high concentrations in the atmosphere.
- The ocean, which absorbs most of global warming's impact, continued to warm and rise to record levels.
- And hotter temperatures in the Arctic interfered with weather patterns in regions directly below it.

Scientists have pegged 2014 as the world's warmest year on record—one of many signs of a changing climate.

“It was a very warm year around the world, particularly in the oceans and most continents,” Deke Arndt, a climate scientist at the National Oceanic and Atmospheric Administration, said July 16 in a press briefing for an annual climate checkup that he and more than 400 other scientists wrote.

The scientists note there is a chance 2014 only tied for being the warmest year, depending on small differences among data sets.

Since climate records began in the 1880s, the global average surface temperature has risen by 0.88 degrees Celsius (1.6 degrees Fahrenheit) through 2014. International negotiators working on a climate deal to be signed at a year-end summit in Paris are trying to keep warming under 2 degrees Celsius (3.6 degrees Fahrenheit), the maximum scientists say is safe.

Arndt said, “the changes that we see in the global climate system,” in temperature and in other indicators such as sea level, “are largely driven by increases in greenhouse gases” from burning fossil fuels and other human activities.

The concentration in the atmosphere of the key greenhouse gas carbon dioxide reached a record 397.2 parts per million (ppm) for the year, with monthly averages for April, May and June passing the symbolic 400 ppm mark.

The report, published in the Bulletin of the American Meteorological Society, looked at a range of indicators, from the depths of the ocean to the outer atmosphere.

“This is the 25th year of doing these reports and I think it's been a pretty consistent and continuous message over the last 10 years at least that we're seeing a planet that is warming, and that is having impacts in other variables,” Thomas R. Karl, who directs NOAA's National Centers for Environmental Information, said in the briefing.

Karl added that he expects the story in 2015 to sound much the same.

The ocean, which absorbs more than 90 percent of the global warming signal, continued to warm in 2014. There were new record highs for both sea surface temperatures and heat content in the upper 2,300 feet of the ocean, the report said.
Greg Johnson, an oceanographer at NOAA, likened the world’s warming seas to a flywheel or a freight train that will continue to barrel forward “long after we stop pushing it.” “If we were to freeze greenhouse gases at their current levels, the seas would actually continue to warm for centuries to millennia,” Johnson said. “And that means that as they warm they expand, and sea level would continue to rise.”

In the Arctic—a region warming twice as fast as the rest of the world—snow melt occurred earlier than average and sea ice extent remained low in 2014. At the beginning of the year, the “polar vortex” flipped weather patterns upside down, bringing cooler-than-average temperatures to eastern North America and much of Russia in exchange for temperatures more than 10 degrees C (18 degrees F) warmer than average in Alaska, the report said. In fact, it has been so warm there that a lack of snow made for harsh conditions in the state’s annual Iditarod sled-dog race in both 2014 and 2015, according to reports of the race.

The Antarctic, meanwhile, showed highly variable temperature patterns in 2014, with strong seasonal and regional patterns of warmer-than-normal and cooler-than-normal conditions that resulted in near-average conditions for the continent as a whole. The region’s maximum sea ice extent reached a record high for the third consecutive year—a phenomenon that scientists are still trying to understand.

### 70. July Was Hottest Month Recorded Worldwide

July was the warmest month ever on record worldwide and 2015 has been so far the hottest year, the U.S. National Oceanic and Atmospheric Administration said recently, just over three months before world leaders seek to reach a climate agreement in Paris. In its monthly global climate report released online, NOAA said many countries and the world’s oceans experienced heatwaves, with the Earth’s oceans temperature also hitting record highs last month.

This July was the all-time highest monthly temperature in the records that date back to 1880, at 61.86 degrees Fahrenheit (16.61 degree Celsius), according to NOAA. The first seven months of 2015 comprised the warmest such period on record globally, at 1.53 F (0.85 C) above the 20th century average, and surpassing the previous record set in 2010 by 0.16 F (0.09 C), it said.

The record comes after NOAA and the U.S. space agency NASA said in January that 2014 was the Earth’s hottest on record, a fact used by the White House and the United Nations to make the case for immediate action to combat climate change.

One of the goals of the UN climate talks is to stop global temperatures from rising more than 2 degrees Celsius above pre-industrial levels, which scientists say is the limit beyond which the world will suffer ever worsening floods, droughts, storms and rising seas.

The U.S. agency says that the rapid rise is mainly attributable to humans burning fossil fuels.

### 71. Leading Climate Scientist: Future Is Bleaker Than We Thought

A 23 July discussion paper by James Hansen, the most famous and respected climate scientist on the planet, argues that the ice melting on and around Greenland and Antarctica will cause rises in sea level that are much faster than mainstream predictions, meaning that we are likely to see several meters of sea level rise this century. It is an argument he has been making for a long time.
Even more startling are the consequences that Hansen thinks will result from this rapid melt. Because fresh water is less dense than saltwater, the cold, fresh meltwater will pool around the coasts of Greenland and Antarctica.

Around Antarctica, this surface layer will act as a blanket, floating on top of warmer, saltier water and preventing it from losing heat to the air. Instead, this heat will go into melting the underside of ice shelves and glaciers. Hansen argues that the growth in sea ice around Antarctica is a sign that this is starting to happen already, with freshening surface water forming sea ice more readily.

This freshwater layer will also shut down the ocean currents that carry heat from the tropics to the poles, so the tropics will warm fast while high latitudes cool down because of the cold surface waters. This resulting temperature difference, Hansen claims, will power superstorms of a size and fury unlike anything we have ever seen.

Such superstorms occurred towards the end of the last interglacial period 120,000 years ago, the paper claims. It details several lines of evidence suggesting that the islands of the Bahamas were frequently pounded by massive waves at this time. For instance, there are wave-formed ridges many kilometers long on the islands, and wave deposits up to 40 meters above current sea level, including massive boulders weighing thousands of tons.

Most terrifying of all, Hansen thinks that all of this could happen with just a 2 °C rise in temperature – the supposedly safe limit.

The consequences, of course, would be catastrophic. “It is not difficult to imagine that conflicts arising from forced migrations and economic collapse might make the planet ungovernable, threatening the fabric of civilization," the paper states.

These claims certainly do not reflect the views of most of climate scientists, and the various lines of evidence presented in the paper are far from conclusive. However: we cannot be sure that Hansen is wrong. When it comes to sea level, just about every glaciologist now agrees that we are heading for massive sea level rises of at least 5 meters. The only contentious issue is how fast this will happen.

The speed question cannot be definitively resolved by studying how fast ice sheets melted in past interglacial periods because the planet has never warmed as fast as it is now. Nor can it be settled by ice models because we have no way of confirming whether they are right about the rate of melting.

There is also wide agreement that large-scale melting of Greenland’s ice will shut down ocean circulation. Again, the main contentious issue is how soon it might happen – and there are hints that it is already happening.

There is certainly no agreement about the superstorms that Hansen predicts. But his argument is based on simple physics: winter storms are driven by the temperature difference between the poles and tropics, so if this difference temporarily increases due to massive ice melt, there will be a period of stronger storms.

The fact is that many of the consequences of rising greenhouse gases are extremely difficult to predict. We can be pretty confident about how much the planet will warm and how much the sea level will rise because there is plenty of evidence from the past, but beyond this there are huge
gaps in our knowledge. And there have already been surprises. There is growing evidence, for instance, that much of the extreme weather around the planet in recent years is a result of changes in the behavior of the jet stream as the poles warm. No one predicted this.

Indeed, the “official” projections of climate scientists have turned out to be too conservative time and time again. Antarctic melting is already a century ahead of schedule. Estimates of sea level rise by the Intergovernmental Panel on Climate Change are going up with every report. Hansen, by contrast, has a history of making predictions that turn out to be bang on the money. That does not mean he is right again. But the mere possibility that he might be should make us all pause for thought. We are still gambling that we can get away with continuing business as usual without reaping the consequences in our lifetimes. It’s a high-stakes gamble that could go horrifically wrong.

72. Surge in Extreme Rainfall Due to Climate Change

The world is suffering a surge in record-breaking rainfall because of climate change, scientists say. Extreme rains, like those that led to flooding and a cholera outbreak that killed hundreds in Pakistan in 2010, are happening 12 percent more often globally and 56 percent more frequently in Southeast Asia than if the world wasn’t warming, according a study by the Potsdam Institute for Climate Impact Research.

“One out of 10 record-breaking rainfall events observed globally in the past 30 years can only be explained if the long-term warming is taken into account,” Dim Coumou, co-author of the study released on July 8th, said in a statement. “For the last year studied, 2010, it is even one event out of four.”

The results are the latest evidence of the dangers from climate change as negotiators from more than 190 nations work on the first worldwide deal to curb greenhouse gases in richer and poorer nations alike as they head into year-end talks in Paris toward a global climate accord. With emissions from fossil fuels at record levels, world temperatures are set to warm 3.6 degrees Celsius by the end of the century, the fastest shift in 10,000 years.

The changes in rainfall are being felt differently in different places, with wet regions tending to see greater increase in record downpours and drier regions the opposite. While rains have increased 31 percent in Europe and 24 percent in central U.S., the Mediterranean and Western U.S. are seeing decreases of 27 percent and 21 percent, respectively, meaning they’re at risk of severe droughts, the study showed.

The scientists analyzed rainfall data from 1901 to 2010 from thousands of weather stations. The jump in record rainfalls fits the expected increase of how much water the atmosphere can store when temperatures rise, the authors wrote.

73. Shippers See Challenges, Opportunities in Thawing Arctic

On the bridge of Finnish icebreaker Urho in Helsinki Harbor, Capt. Matti Bjorkman surveyed with dismay the gently rolling waters around the idle ship and sister vessels, the Voima and the Siso. “No ice,” he said. It was early March; there was supposed to be ice. But with the warming of the Arctic, open waters in the region are an increasing phenomenon leading companies such as Urho operator Arctica Shipping to find other uses for vessels that have long been considered part of the infrastructure in the polar region.
Ice breakers may find new life farther north, clearing opening shipping lanes as Arctic warming allows more ships to use North America’s Northwest Passage and Russia’s Northern Sea Route to travel between North America, Asia and Europe.

With that comes the building or upgrading of infrastructure to connect businesses to northern ports. And the changes are not only at sea. Buildings and highways atop thawing permafrost—the thick, polar subsurface layer of soil that has historically remained frozen year-round—will need upgrading to remain viable.

More broadly, the thawing permafrost releases methane, which exacerbates climate change.

“A rapidly warming Arctic climate threatens traditional ways of life while affording new shipping routes and increased opportunities for trade, [and] allows for increased oil and gas exploration while risking environmental pollution,” U.S. Department of State Special Representative for the Arctic Adm. Robert J. Papp Jr. told the U.S. Senate Committee on Energy and Natural Resources earlier this year.

The Arctic region, defined as the Arctic Ocean and surrounding land, is 5.5 million square miles comprised of Greenland and Spitsbergen, and the northernmost parts of the U.S., Canada, Norway and Russia.

Much of the region’s oil, gas and mineral wealth is yet to be quantified. But that could be changing. In May, the U.S. gave conditional approval for Shell Gulf of Mexico Inc. to begin offshore drilling for oil in the Arctic this summer. On July 22, Royal Dutch Shell received the last two conditional permits it needed to drill in Arctic waters this summer off the north coast of Alaska.

And the increasing availability of polar sea routes could let ships in the not-too-distant future move faster to and from northern ports than through the Suez or Panama canals. In fact, some critics of a proposed trans-Nicaragua canal say the looming availability of polar routes could make building a second Central American canal for the world’s largest ships unnecessary.

Trans-Arctic shipping raises new issues, because coastal states have the authority to regulate foreign shipping. While that does not extend to the high seas, where transiting ships are only subject to global shipping safety, environmental and security rules and standards, Arctic states are disputing what territory belongs to whom and what the continental shelf encompasses.

This is where sections of the International Maritime Organization’s (IMO) Polar Code and its related conventions come into play. The IMO in November 2014 adopted the International Code for Ships Operating in Polar Waters (Polar Code) and related amendments to the International Convention for the Safety of Life at Sea to make it mandatory to protect ships and people aboard them, both seafarers and passengers, in Arctic and Antarctic waters.

The countries involved are Canada, Denmark, Norway, Russia, the U.S.—and, to a lesser extent, Finland, Iceland and Sweden.

Matti Anttonen, Finland’s undersecretary of State for external and economic relations, said adherence to the Polar Code will be key in coming years. “If there any accidents, we need rules in place to prevent environmental degradation,” Anttonen said. “It will be challenging in the summer. It will be very challenging in the winter, even if climate change continues.”
Territorial issues will likely have to be settled under the 1982 United Nations Convention on the Law of the Sea.

The National Oceanic and Atmospheric Administration’s (NOAA) 2014 Arctic Report Card said the Arctic is warming twice as fast as anywhere else on Earth. Sea ice extent for Feb. 25, 2015, was 14.54 million square kilometers (5.61 millions square miles), the lowest on record, the National Snow and Ice Data Center said.

NOAA said a general increase in permafrost temperatures has been observed during the past several decades in Alaska, northwest Canada and Siberia. With the permafrost in doubt, compromising both winter ice roads and the base on which all-season roads are built, Canada’s Northwest Territories must invest heavily in shoring up major seasonal transportation and commercial routes during the next 25 years, territorial Transportation Minister Tom Beaulieu said.

Thawing also means the ground can absorb more precipitation, which leaves less runoff for rivers.

In 2013, the White House released its National Strategy for the Arctic, saying it would balance energy and minerals development with conservation interests in the region. And earlier this year, the U.S. Army Corps of Engineers, Alaska District, released a draft feasibility report and environmental assessment tentatively selecting a plan to establish a deepwater port in Nome, Alaska, to support increased vessel traffic and economic development in the Arctic.

The study identified the need for enhanced marine infrastructure to support the offshore oil and gas industry, search and rescue, and oil spill response. Proposed improvements for the Port of Nome include demolishing the existing spur breakwater at the end of the causeway, constructing a 2,150-foot causeway extension and 450-foot dock, as well as dredging the newly created protected area and associated entrance channel to 28 feet.

Norway, Finland, South Korea and China—while not dealing with thawing land—are rushing to invest in infrastructure to allow them to use or gain access to the North American Northwest Passage and the Russian Northern Sea Route.

In recent years, use of the Russian Northern Sea Route has been more active than that of the North American Northwest Passage. The Northern Sea Route first opened to ship passage in 2005, the International Centre for Trade & Sustainable Development said. Thirty-one ships transited between Asia and Europe via the Northern Sea Route in 2014, while another 22 used part of the route, according to Northern Sea Route Information Office statistics. Most were under Russian flags. In 2013, 71 vessels used the Northern Sea Route.

For the Northwest Passage, the number of transits increased from four a year in the 1980s to 20 to 30 a year in 2009–2013, Canada’s Northwest Territories Ministry of Environment and Natural Resources said.

The U.S., which includes Alaska’s Beaufort Sea and Chukchi Sea coastlines, took over chairmanship of the Arctic Council for a two-year term this year. The council acts as a venue for coordination among the U.S., Canada, Russia and other nations that border the Arctic or are interested in it.

In April, the council’s ninth ministerial meeting issued the Iqaluit Declaration 2015. It acknowledged reducing greenhouse gas emissions is the most important contribution to addressing global and Arctic climate change and sustainability; welcomed assessments on black carbon, tropospheric...
ozone and methane; and decided to implement a framework for action on enhanced black carbon and methane emissions reduction.

While welcoming the changes, Alexander Shestakov, WWF’s global Arctic program director, said nations outside the Arctic region are affected by the Arctic climate and also should be looking out for its welfare. “It is time those states showed their commitment to maintaining the Arctic environment by supporting pro-environmental and sustainability clauses in such instruments as the Polar Code of the International Maritime Organization, and through the coming climate negotiations in Paris,” Shestakov said, referring to the end-of-2015 UN summit where the global community will attempt to reach agreement on a plan to fight climate change.

74. IEA Sees Oil Glut Persisting Despite Soaring Demand

World oil demand is expanding at its fastest pace in five years thanks to rebounding economic growth and low prices, but global oversupply will last through 2016, the West's energy watchdog said recently. The International Energy Agency said in a monthly report that it was steeply raising its demand growth outlook for this year and 2016, and expected non-OPEC supply growth to decline next year, with U.S. producers hardest hit.

"While a rebalancing has clearly begun, the process is likely to be prolonged as a supply overhang is expected to persist through 2016 - suggesting global inventories will pile up further," the Paris-based IEA said. The view from the IEA chimes with that of the U.S. government, which recently lowered U.S. production forecasts, signaling that a 60 percent rout in benchmark prices since last summer may finally be weighing on shale output.

Oil prices have fallen to below $50 per barrel, pressured by an abundance of supply and a strong dollar. The views from the IEA are more bullish than those of OPEC, which recently raised its forecast of oil supplies from non-member countries.

The IEA said it saw global oil demand rising by 1.6 million barrels per day (bpd) in 2015, up 260,000 bpd from its forecast last month, citing solid economic growth and consumers responding to lower prices. "That's the biggest growth spurt in five years and a dramatic uptick on a demand increase of just 0.7 million bpd in 2014," it said. It added that persistent macroeconomic strength will support above-trend growth at 1.4 million bpd in 2016, up 410,000 bpd from its previous forecast.

The decline in crude prices has prompted oil companies to cut their investment plans. "While a drop in costs and efficiency improvements will help to offset some of the spending cuts, output is likely to take a hit soon," the IEA said.

The IEA said it saw non-OPEC supply growth slowing sharply from a 2014 record of 2.4 million bpd to 1.1 million bpd this year and then contracting by 200,000 in 2016 - with the United States hardest hit. The prediction signals that OPEC's strategy of not cutting output, and hurting rival producers instead with lower prices, might be finally working. However, the strategy, introduced in November last year, has created such global oversupply that it will take another year and a half to absorb the glut.

"Our latest balances show that while the overhang will ease from a staggering 3.0 million bpd in the second quarter of 2015, its highest since 1998, the projected oversupply persists through the first half of 2016," the IEA said.
Assuming OPEC production continues at around 31.7 million bpd - its recent three-month average - through 2016, the second half of 2015 will see supply exceeding demand by 1.4 million bpd, testing storage limits worldwide, the IEA said. The surplus will drain down to about 850,000 in 2016, with the final three months of 2016 marking the first quarter of a potential stock draw.

"This outlook does not include potentially higher Iranian output in the case of sanctions being lifted," the IEA said.

It said a stronger demand outlook and slower non-OPEC growth have raised the call on OPEC crude for 2016 to 30.8 million bpd, 1.4 million bpd higher year-on-year and up 600,000 bpd from the IEA's forecasts in its previous report. But the new, higher call on OPEC is still far below the group's current production volumes, which are holding steady near a three-year high due to robust pumping from Saudi Arabia and record-high Iraqi production.

As a result of huge global oversupply, OECD inventories increased counter-seasonally by 9.9 million barrels to an all-time high of 2.916 billion barrels in June, the IEA said.

75. Speed of Glacier Retreat Worldwide 'Historically Unprecedented'

The Rhone glacier, Switzerland. Sea levels are rising as a consequence of the rapid loss of glacial ice worldwide. Photograph: REX Shutterstock

In the past year or so, researchers have identified rapid rises in meltwater and alarming cases of glacial retreat in Greenland, West Antarctica, the Canadian and Alaskan coastal mountains, in Europe and in the Himalayan massif. They have also watched glaciers pick up speed downhill. One satellite-based study, confirmed by on-the-ground measurements, of the Jakobshavn glacier in Greenland, confirms that the river of ice is now moving at the rate of 46 meters a day, 17
kilometers a year, which is twice the speed recorded in 2003, which in turn was twice as fast as measured in 1997.

The World Glacier Monitoring Service, based at the University of Zurich in Switzerland and with partners in 30 countries, has been compiling data on changes in glaciers over the last 120 years. And it has just compared all known 21st century observations with data from site measurements, aerial photography and satellite observations and evidence from pictorial and written sources. Altogether, the service has collected 5,000 measurements of glacier volume and changes in mass since 1850, and 42,000 records of variations in glacier fronts from records dating back to the 16th century.

And the evidence is clear: the glaciers are in retreat, worldwide, and the retreat is accelerating.

“The observed glaciers currently lose between half a meter and one meter of ice thickness every year – this is two to three times more than the corresponding average of the 20th century,” says the study’s lead author, Michael Zemp, who directs the monitoring service. “Exact measurements of this ice loss are reported from a few hundred glaciers only. However, these results are qualitatively confirmed from field and satellite observations for tens of thousands of glaciers around the world.”

The great ice sheets help maintain the climate zone differences that drive weather patterns. They provide distinct ecosystems that support precisely adapted lifeforms, from mountain wildflowers to snow leopards. They offer a source of tourist income for mountain communities and deliver spring and summer meltwater to irrigate crops in the fertile valleys downstream. And as long as ice is safely stored in mountain ranges, it isn’t contributing to sea level rise.

But sea levels are creeping up inexorably every year, as a consequence of galloping glacial retreat in the polar, temperate and tropical zones.

This loss of ice is not uniform: researchers recorded cases of glacier advance, sometimes of a few hundred meters, in the 1990s. But these intermittent glacial gains are nothing like the return of the ice recorded during the so-called “little Ice Age” that began in the 16th century, when the Thames froze hard enough to support annual winter fairs. The big picture is one of retreat, everywhere.

Some glaciers may now be doomed. In the last century, because of fossil fuel emissions of greenhouse gases into the atmosphere, global average temperatures have crept up by almost 1C to trigger wide-scale melting. Even were the world to abandon fossil fuel use right now, some melting would continue. “Glaciers in many regions will very likely suffer further ice loss, even if climate remains stable,” the researchers conclude.

76. Rich Nations’ Climate Plans Fall Short Of Hopes for Paris Summit

Developed nations are on track to cut their greenhouse emissions by almost 30 percent by 2030, recent calculations show, falling far short of a halving suggested by a U.N. panel of scientists as a fair share to limit climate change.

The developed nations, which have historically emitted most greenhouse gases by burning fossil fuels, are expected to lead by announcing deep cuts before the Paris summit, which is meant to agree a United Nations pact to limit warming beyond 2020. Their collective ambitions are falling short.
A Reuter’s review of national pledges shows that a core group of developed nations intends to cut emissions to the equivalent of 9.0 billion tons of carbon dioxide by 2030. That implies a 26 percent cut but the final total could be closer to 30 percent mainly because U.S. President Barack Obama's cuts run only to 2025, opening the possibility of deeper cuts beyond that date. U.S. emissions account for about half of the total for developed nations.

"The overall ambition of the developed countries is still not sufficient," said Niklas Hoehne, founding partner of the New Climate Institute that tracks pledges, referring to a U.N. goal of limiting rising temperatures to 2 degrees Celsius (3.6 Fahrenheit) above pre-industrial times.

Last year the U.N.’s Intergovernmental Panel on Climate Change (IPCC) said rich nations that were members of the Organization for Economic Cooperation and Development in 1990 should halve emissions by 2030 from 2010 to limit warming. The depth of rich nations' cuts is a benchmark for emerging economies considering how far to rein in their rising emissions. A few emerging nations, led by China, have set goals but many others such as India and South Africa have yet to act.

A Climate Action Tracker that Hoehne helps to compile estimates that current pledges put global temperatures on track to rise by 3.1 Celsius by 2100, threatening ever more droughts, floods, heat waves and rising sea levels.

Frank Melum, a senior analyst at Thomson Reuters Point Carbon, said pledges by rich nations could be ratcheted up by reviews after the Paris summit. "Many of the 2030 targets reflect policies that have already been adopted, for example renewable targets and power plant regulations, so in a way countries are promising what they are fairly confident they can deliver on," he said. "Ambitions could increase should they take on new measures, but for every percentage point it will get harder," he said.

The national promises are hard to compare because many nations have picked the most flattering starting years for action, including 1990, 2005 and 2013. Some are vague about how far they will use forests to soak up greenhouse gas emissions.

As a guide for Paris, the United Nations says it will calculate by how much all the national plans submitted by Oct. 1 will slow down warming. It has said it is already clear that the cuts will not be enough to limit warming to the 2C target but hopes the U.N. deal will put in place mechanisms to strengthen action in future.

77. Earth Now Halfway To UN Global Warming Limit

It’s the outcome the world wants to avoid, but we are already halfway there. All but one of the main trackers of global surface temperature are now passing more than 1 °C of warming relative to the second half of the 19th century, according to an analysis done for New Scientist.
We could also be seeing the end of the much-discussed slowdown in surface warming since 1998, meaning this is just the start of a period of rapid warming. “There’s a good chance the hiatus is over,” says Kevin Trenberth of the National Center for Atmospheric Research in Boulder, Colorado. “The slowdown in warming since 1998 was partly due to oceans taking up more heat. That could be over.”

2015 is shaping up to be a scorcher (Image: Mohammed Salem/Reuters)

Last year was the hottest since records began, but only just. With an El Niño now under way – meaning warm surface waters in the Pacific are releasing heat into the atmosphere – and predicted to intensify, it looks as if the global average surface temperature could jump by around 0.1 °C in just one year. “2015 is shaping up to smash the old record,” says Trenberth.

The UN negotiations on climate change aim to limit warming to 2 °C above pre-industrial temperatures. There is, however, no agreement on how to define pre-industrial temperature, says Ed Hawkins of the University of Reading, UK. Because some global temperature records only begin in 1880, the period 1880 to 1899 is the easiest “pre-industrial” baseline for measuring warming. It is somewhat misleading, though, because the 1880s were particularly cold after the eruption of the Krakatoa volcano. The period 1850 to 1899 is a better baseline, says Hawkins.

What’s more, there are several long-term records of global annual average surface temperatures. All differ slightly because they use slightly different data sets and have their own ways of adjusting for relocations of weather stations and changes in instrumentation over time.

Kevin Cowtan of the University of York, UK, created and still maintains one such record, called “Cowtan & Way version 2.0”. It is based on another record, maintained by the UK Met Office, called HadCRUT4. Cowtan’s version differs because it compensates for missing data from areas with few weather stations, like the Arctic.

The various records also show temperature changes relative to different baselines. For instance, NASA’s GISTEMP record shows warming relative to the 1951 to 1980 average.

At the request of New Scientist, Cowtan adjusted his and other measures to show annual warming relative to the same time frame: the 1850 to 1899 period. All but one set of adjusted figures show that we will have already passed 1 °C before the next round of UN talks on a global climate treaty get under way in December (see graph below).

“It looks very likely that all except HadCRUT4 will break 1 °C this year,” says Cowtan. “HadCRUT4 is somewhat dependent on a strong El Niño boost.”
And if climate talks do not lead to drastic action, we could pass the 2 °C mark around the middle of the century. The planet may continue to warm fast in the coming years, at a rate more like those from 1984 to 1998, when it warmed at 0.26 °C per decade.

From 1998 to 2012, the rate slowed to about 0.04 °C per decade, according to the last International Panel on Climate Change report. This was due to a combination of factors: a less active sun, higher levels of cooling aerosols from volcanoes and Asian factories, and increased heat uptake by the oceans.

One reason the oceans took up more heat was because of a phenomenon known as the Pacific Decadal Oscillation. The surface of the northern Pacific tends to flip between being extra cold and extra hot every two or three decades. It was in a cold, negative phase but now appears to have switched to a positive one, Trenberth says.

So temperatures might briefly drop next year after the current El Niño ends, he says, but the average warming rate over the next decade or so could be closer to the 0.2 °C per decade predicted for the business-as-usual pathway we are on.

We are also on the cusp of another ominous milestone: the level of carbon dioxide in the atmosphere is starting to edge past 400 parts per million. And with global emissions of greenhouse gases rising ever faster, there’s no end in sight to the grim trend.