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Scientists Observe First Signs of Healing in the Antarctic Ozone Layer
1. EU Cities in Push for Tougher Air Pollutant Limits

The mayors of Europe’s largest cities have renewed calls for stricter emission limits on major air pollutants before representatives of EU institutions meet to negotiate changes to the National Emission Ceilings (NEC) Directive. In a strongly-worded joint letter, the mayors of London and Paris, Sadiq Khan and Anne Hidalgo, urged their respective governments, the European Commission and MEPs to use what they called a “once-in-a-generation” opportunity.

The NEC Directive sets national limits on emissions of nitrogen oxides (NOx), sulfur dioxide, particulate matter (PM), ammonia, volatile organic compounds and methane.

Cities all over Europe are suffering poor air quality, with levels of NOx and PMs in particular frequently exceeding legal limits set in the Ambient Air Quality Directive, as evidenced in recent data from the EU and the World Health Organization among others. For example, WHO sets different limits for large and small particulate matter (PM), with larger particles (PM10) subject to limits of 20 micrograms of gaseous pollutant per cubic meter of ambient air (µg/m3) and smaller particles (PM2.5) required to be below 10 µg/m3. However, the latest figures show that the vast majority of EU capitals exceed PM10 limits, with worrying consequences for public health.

In 2013, Warsaw and Bucharest recorded concentrations of PM10 at 33 µg/m3. Other cities also reported high levels of PM10 with Budapest 29 µg/m3, Rome 28 µg/m3, Copenhagen 27 µg/m3, and London 22 µg/m3 in the same year.

A smaller number of EU capitals did comply with WHO limits, including Madrid and Helsinki (both at 19 µg/m3), followed by Dublin (16 µg/m3), Lisbon and Reykjavik (15 µg/m3), and Tallinn (14 µg/m3).

Meanwhile, Eurocities, a city coalition that represents more than 130 large cities, has asked for tougher limits on ammonia emissions, and called for flexibilities allowed to EU member states as they comply with the NEC Directive to be kept “to a minimum”. Agriculture is by far the biggest source of ammonia emissions, but ammonia can drift into cities and cause air quality problems, according to Eurocities.

Latest trialogue talks on the NEC Directive have seen the Dutch EU Presidency push for ammonia and PM ceilings that would reduce EU premature deaths by 50% by 2030 as a compromise between the Council’s and the Parliament’s positions, which target 48% and a 52% reductions respectively. Khan and Hidalgo, as well as Eurocities, insist that the target should be at least the 52% level proposed by the Parliament, adding that “even greater ambition” might be required. Eurocities policy adviser Joana Cruz criticized the compromise, saying that every percentage point that the target is relaxed represents “4,000 additional deaths” every year.

The next trialogue session will take place on 8 June when a “provisional agreement” on the Directive’s review is expected.

The two mayors also called official testing for new car NOx emissions to be further strengthened. “It cannot be right to impose air pollution standards on public authorities, while at the same time giving the automotive industry the green light to infringe them,” said Khan and Hidalgo in their letter.
2. **Air Pollution Is ‘Europe’s Greatest Health Risk’**

More than 95% of EU urban areas breach air pollution standards set by the EU and the World Health Organization (WHO), according to a report by UNECE. The sixth Global Environment Outlook report said air quality is now Europe’s greatest health risk as well as having a severe impact on ecosystems and biodiversity across the continent. Following up on the last report from 2012, it said “environmental challenges there are now more systemic, multifaceted, complex, and intertwined with socio-economic factors”.

The EU’s continued support for diesel cars, albeit those that emit less CO2 to mitigate climate change, has contributed to the problem because these vehicles emit more pollutants, UNECE noted.

UNECE said that climate change is one of the largest threats to the environment, with most coastal areas in Europe now experiencing sea level rise. The report said: “To meet Paris Agreement’s goal, more ambitious targets are needed across the region.”

The EU has a greenhouse gas reduction goal of 40% by 2030 relative to 2005 levels. But many argue this target needs to be increased to meet the EU’s long term target of near decarbonization by 2050.

UNECE recommended that the EU should work to align its air quality and climate change policies as their broad scope to reduce fossil fuel consumption is the same.

Biodiversity loss caused by the spread of agriculture and urban areas was also flagged up as a particular problem in the EU, alongside chemical pollution caused by consumption growth outstripping the capacity of waste procedures.

The UNECE report was launched as ministers from around the world met in Georgia for the 8th Environment for Europe Ministerial Conference, where the opening address singled out air pollution as the “deadliest mass murderer in history”.

3. **France Says Dirty Air Leads to 48,000 Deaths Annually**

Air pollution causes an estimated 48,000 deaths per year in France, reducing life expectancy by more than two years in the country's biggest cities, according to a report released June 21 by the new national public health agency.

With air pollution Europe’s top environmental cause of death, ambitious air improvement policies could avoid as many as 34,000 deaths per year in France, raising life expectancy some nine months, by contributing to prevention of respiratory and cardiovascular diseases and cancer linked to such pollution, said the agency, whose French name is Santé Publique France.

The study measured air pollution from human activity, specifically particulate matter of 2.5 micrometers and under, emitted from industry, transport and agriculture, for 2007-2008. It said PM 2.5 was used as a “tracer” or “global quality indicator” of overall air pollution, which can include PM 10, sulfur oxides, volatile organic compounds and metals such as lead, mercury and cadmium.
The report said densely populated areas including the Paris region, the Lyon-Marseille metro area and the area around Lille had the highest PM 2.5 concentrations. More than half of the estimated 48,000 deaths due to PM 2.5 pollution were in cities with populations over 100,000, for which average loss of life expectancy was 1.5 years for a 30 year-old person.

Average air pollution-related life expectancy loss in the new study was 10 months for areas with populations of 2,000 to 100,000 people, and nine months for rural areas, significantly less than for big cities. However, rural areas with significant industrial activity also had significant PM 2.5 levels, the agency said.

The report estimates health benefits of four “policy scenarios” for lowering pollution levels. In scenario 1, if all French communities reduce their PM 2.5 to levels observed in the 5 percent of communities with the lowest pollution levels, 34,000 deaths could be avoided yearly, with average life expectancy gained of nine months, rising to over 1 year in the most polluted areas.

Under scenario 2, which calls for reducing PM 2.5 levels for all of continental France to the World Health Organization-recommended 10 micrograms per cubic meters, the country could avoid 17,700 deaths per year and raise life expectancy an average seven months for a 30 year old living in the biggest cities.

In scenario 3, if the proposal under Frances’ 2010 Grenelle Environment program to limit PM 2.5 to 15 micrograms per cubic meters were reached for all of continental France, that would avoid 3,000 deaths per year, and raise life expectancy three months in the most populated areas.

Scenario 4, the EU-recommended PM 2.5 target of 20 micrograms per cubic meter, would allow avoiding just 10 deaths per year, but raise average life expectancy 1.5 months in areas where PM 2.5 levels exceed that today, the report said.

4. IEA Report: Tighten Air Pollution Limits by 10-15% to Save Lives

The EU could slash nitrogen oxide and sulfur dioxide levels in the air by an additional 10-15%, preventing 50,000 pollution-related deaths by 2040, the International Energy Agency (IEA) has said. In its latest World Energy Outlook, the organization urged world policymakers to tighten up existing policies and roll out air pollution curbing measures by 2025. Its figures show that the current limits are allowing 6.5 million pollution-related casualties a year around the globe. IEA said the EU could implement stricter emissions standards for diesel vehicles and biomass boilers.

Introducing these changes could see the EU cut deaths linked to outdoor air pollution from 340,000 in 2015 to 180,000 in 2040, representing a huge fall in deaths forecast under existing policies by that year, the IEA said.

The report found the EU effectively decoupled emissions from economic and demographic growth between 1990 and 2013. Even though EU GDP increased at a yearly 1.6% in the period, sulfur oxide (SOx) and nitrogen oxide (NOx) levels fell by 90% and 50% respectively.

According to the study, if the EU applies its current and pledged legal instruments – including contributions towards Paris goals and targets for renewables and energy efficiency – NOx and sulfur dioxide (SO2) emissions will shrink by a respective 55% and 50% by 2040.

However, IEA researchers said NOx emissions could be slashed by a further 10% (65% in total) by 2040 if fuel-efficiency standards are tightened for both light- and heavy-duty diesel
vehicles and diesel cars are gradually replaced by gasoline hybrid, natural gas and electric alternatives.

In addition, the EU could cut SO2 emissions by an additional 15% (65% in total) by 2040 compared to current efforts if stricter pollution limits are introduced for industry – especially the metals, refineries and cement producing industries – and households.

But the outlook is less promising for PM2.5 emissions. The IEA said EU levels of the pollutant will drop by less than 20% by 2040 given current policies and a “recent surge” in the use of biomass in boilers for heating. To counter this, researchers propose reforming the EU’s Ecodesign Directive to set tougher emission caps for boilers in a bid to slash PM2.5 levels by an extra 20% by 2040.

5. ICCT: Policy Options for Reducing CO2 Emissions from Road Transport in the EU

The European Union’s 2030 climate and energy framework requires the transport, building and agriculture sectors to reduce greenhouse gas emissions to 30 percent below a 2005 baseline by 2030. This study\(^1\) demonstrates that meeting that goal depends on deploying a combination of new transport policy measures that include mandatory carbon dioxide (CO2) standards for both passenger vehicles and heavy trucks, improving vehicle emissions testing regulations, and accelerating the transition to electric vehicles.

The analysis shows that if current policies remain unchanged, CO2 emissions from cars and trucks in the EU will likely increase by 7.6 percent from 2005 to 2030, reaching 960 million metric tons (Mt) per year in 2030. Tightening the mandatory CO2 target for new passenger cars from 95 grams per kilometer (g/km) in 2021 (as measured on the New European Driving Cycle) to 78 g/km in 2025 and 60 g/km in 2030 would prevent 95 Mt of CO2 per year in 2030. However, setting a target of 68 g/km for 2025 and 42 g/km for 2030 would further increase carbon emissions averted, to 144 Mt per year in 2030. Strengthening the vehicle emissions testing system in Europe, by introducing a not-to-exceed limit for CO2 under real-world driving conditions, would help close the gap between laboratory and real-world values, and would avoid another 25 Mt of CO2 emissions per year by 2030.

In contrast to other major automotive markets, the EU does not currently regulate CO2 emissions from heavy trucks. Introducing mandatory CO2 standards for new trucks in 2025 could prevent about 17 Mt of CO2 per year in 2030. If such standards were introduced even earlier, in 2020—a feasible idea, given that the EU is already expected to require CO2 certification of heavy-duty vehicles (though not, at this point, to take the next step and set an emissions performance standard) in 2018—that effect would more than triple, to about 55 Mt of averted CO2 emissions per year in 2030.

Accelerating the transition to electric-drive of the passenger car fleet in Europe, with the aim of seeing electric vehicles reach a 23 percent share of the new car market in 2030, could prevent another 19 Mt of CO2 in that year. By contrast, including the transport sector into the EU’s Emissions Trading System, an idea that some in industry and on the European Council have floated, would not produce any significant CO2 reductions.

By implementing a comprehensive set of policy measures, including not only those outlined above but also support for advanced biofuels and higher fuel taxes, CO2 emissions could be reduced

\(^1\) “Direct CO2 emissions from passenger cars and trucks in various policy option narratives, 2005–2030.”, ICCT
by a total of 282 Mt per year in 2030, which is 24 percent below the 2005 baseline. Additional measures, not directed to the deployment of vehicle technologies and fuels, would still be required to meet the 30 percent reduction requirement defined by the European Union’s 2030 climate and energy framework.

6. Accelerate Adoption of Car Emissions Reforms, Says EU Commissioner

European commissioner for industry Elzbieta Bienkowska has called for greater urgency in pushing through the EU’s vehicle type approval and emissions testing reforms, saying the European car industry can no longer afford to “bend the rules on emissions”. Speaking at a Federation Internationale de l’Automobile’s (FIA) event in Brussels on June 29th, the commissioner said the European Council and Parliament needed to speed up adoption of the proposals issued last January.

She said the situation wasn’t being helped by a lack of cooperation among car manufacturers, many of whom she claimed were in denial about the level of action needed in the wake of Dieselgate. As a result, the Commission has still not received all the technical details it needs from investigations into car emission test fraud.

“We have made some progress, but not enough,” she said. “I am getting weary of explaining to MEPs and environment ministers why we still don’t have the full facts and why we still don’t have adequate action.”

Bienkowska warned that Europe’s car industry risked falling behind the rest of the world unless it faced up to the problem. “Until it is fully addressed, the future won’t be European. It will be American, it will be Chinese or it will be Indian.”

The commissioner used her speech to call for a “clear policy target” for zero emission vehicles and emphasized that the Commission would push ahead with making its testing regime fit for the future. This, she said, would be achieved through implementation of the new emission testing procedures, notably the Real Driving Emission (RDE) and Worldwide harmonized Light vehicles Test Procedures (WLTP).

The commissioner also confirmed there will be a communication later in the year on a low-carbon transport system, with subsequent proposals to provide “long-term investment certainty”.

The commissioner’s speech has been welcomed by green transport groups. Transport & Environment’s clean vehicles manager Julia Poliscanova told ENDS that EU member states needed to work together more, rather than trying to block progress. “Some member states are against any new reforms that the Commission has proposed, thus obstructing any improvement and overhaul of the EU vehicle testing system so urgently needed.”

Speculating on the prospect of a zero emissions target, Poliscanova said that as part of the new cars regulations, a separate ultra-low emissions mandate should be set for each manufacturer, similar to the US, requiring them to sell at least 15% ultra-low emission vehicles each year.

7. Germany Reportedly Wants Stricter EU Rules for Car Emissions

Germany wants stricter European Union rules on emissions from motor vehicles, the transport ministry said, confirming a report by the financial daily Handelsblatt. The proposal came after a
German investigative committee last month listed 30 car models that showed suspiciously high levels of CO2 emissions and would require further testing.

Germany subjected diesel models to tests after Volkswagen admitted it had cheated U.S. emissions tests by installing software capable of deceiving regulators in up to 11 million diesel vehicles worldwide. The Handelsblatt report of a German call for tougher rules cited a document prepared for a meeting of EU transport ministers in Luxembourg.

The thrust of the proposal appeared to be to toughen CO2 rules enough to help defeat or deter the use of technology in car engines that can outwit emissions tests. The document also said carmakers should be forced to disclose what kind of technology they use to protect engines in punishing driving conditions and how such software works.

Transport Minister Alexander Dobrindt said last month that General Motors’ Opel division had admitted that its Zafira model includes engine software that switches off exhaust treatment systems under certain speed and air pressure conditions in order to protect the engine. But Opel said such technology was legal.

The case is distinct from the emissions case involving Volkswagen, which concerned the rigging of exhaust emissions tests as opposed to shutting down exhaust reduction systems under certain conditions.

8. Germany Plans Tax Breaks, Subsidies to Boost E-Cars

After months of wrangling, the German Cabinet is hoping to boost uptake of electric cars in the country with a 1 billion euro ($1.12 billion) package of measures, including tax breaks and a controversial 4,000 euro ($4,500) subsidy for companies and private individuals buying e-cars.

Electric car buyers will receive 4,000 euros toward the cost of their vehicle, while those opting for a hybrid car will get 3,000 euros ($3,370), under a plan announced on May 18th. But the incentive will apply only to cars costing less than 60,000 euros ($67,000). The costs will be divided between industry and the state.

Environmental activists and members of Germany's opposition Green Party have long been calling for a subsidy scheme to boosts the country's e-mobility plans, which include getting 1 million electric cars on the road by 2020.

According to the latest government figures, there were around 55,000 e-cars, including hybrid and pure electric cars, on German roads in February. The government hopes to boost that number to 500,000 by the time the subsidy fund runs out in 2019 at the latest, according to a statement.

The slow uptake is partly an image problem and partly due to higher upfront costs for e-vehicles compared to regular cars. Existing legislation, such as the E-mobility Act, which entered into force June 2015 and allows municipalities to give electric cars privileges such as access to bus lanes, is insufficient to make the cars more attractive, say analysts.

The matter has taken on more urgency recently as Germany has to green its transport sector if it is to reach its target of reducing carbon emissions by 40 percent by 2020 compared to 1990 figures, analysts said. In 2014, emissions increased by 3 percent in the German transport sector, which is responsible for 20 percent of the country's greenhouse gas emissions, according to environmental think tank Öko-Institut.
The decision to adopt the subsidy, as well as a 10-year motor vehicle tax exemption for new electric cars, came despite criticism from the Federal Ministry for Economic Affairs and Energy's scientific advisory board. In a letter dated April 2, the committee said the measures were "too expensive" and would not necessarily have the desired effect of reducing carbon emissions, the energy required to power electric cars could result in more carbon dioxide production. "In extreme cases, the savings effect could be zero or even negative," wrote the committee, which added "there were simpler and more cost-effective ways" to reduce emissions.

Those charging e-vehicles at work will not have this counted as a taxable non-cash benefit even if electricity costs are being saved. This is in contrast to other such employee benefits including food coupons or company cars, according to a May 18 economics and energy ministry statement.

Employers also will benefit. They will be able to subsidize the expansion of charging facilities on their premises through income tax. Around 300 million euros also are set to be poured into a nationwide network for charging stations between 2017 and 2010.

9. EC Approves Germany’s €1.2bn Electric Car Incentive Scheme

A German government program to provide €1.2bn worth of incentives to encourage people to buy electric and hybrid cars is set to launch after being cleared by the European Commission. In a statement, Germany’s industry ministry said the Commission had given the program the green light after determining that the incentives were not anti-competitive. The scheme will take effect retroactively on 18 May.

10. Germany Should Have Emissions-Free Car Fleet by 2030

All new cars registered in Germany should be emissions-free by 2030 at the latest to help meet pollution reduction goals, a senior government official said June 13. Germany's pledge to cut carbon dioxide output by 80 percent to 95 percent by 2050 will be in jeopardy unless the country radically reduces transportation pollution, said Deputy Economy Minister Rainer Baake. Since cars typically have a 20-year lifespan, registrations of new diesel and gasoline cars should be reduced during the next 15 years, he said.

"Fact is, there's been no reduction at all in CO2 emissions by transport since 1990," Baake said at a Tagesspiegel newspaper climate forum in Berlin. "We don't have any answers to cut truck emissions right now, but we do have answers for cars."

Germany is behind in cutting greenhouse gas that transportation emits, which according to the Environment Ministry accounts for a fifth of the country's carbon dioxide pollution. The sector has to cut some 10 million metric tons of carbon dioxide during the next five years, from a tally of about 165 million tons last year. While the country has committed to reducing emissions 40 percent by 2020 compared with 1990 levels, its adoption of electric cars has been sluggish.

Chancellor Angela Merkel's government pledged subsidies this year to speed electric-car sales, a move that was accelerated by Volkswagen AG's emissions scandal. Buyers of all-electric and hybrid vehicles can claim cash incentives, moves already in operation in countries including China, Norway and France. The program could spark sales of about 500,000 electric cars by 2020, according to the Environment Ministry.
Purely electric vehicles as a portion of all cars on German roads could reach about 8 percent in 2025 from 0.6 percent this year, according to a forecast from the Center of Automotive Management institute. The government so far has stuck with a plan to put a million hybrid and battery plug-ins on the road by 2020 and 6 million by 2030.

Electric-car sales still remain a fraction of all German vehicle sales. About 130,000 hybrids and 25,000 all-electric cars were registered on German roads as of January compared with 30 million gasoline cars and 14.5 million diesels, according to the KBA vehicle registration authority.

11. Study Says Ban Diesel Vehicles in Cities to Meet Pollution Limits

Member states that are failing to comply with EU air pollution limits should consider banning diesel cars in cities, a study commissioned by the European Parliament’s environment committee has said. Researchers urged national policymakers to consider the move, as well as the less dramatic policy of reducing the number of diesel vehicles, to help them meet air quality regulations.

The research showed that in 2014 two thirds of member states had breached limits for pollutants such as nitrogen dioxide (NO2) and particulate matter (smaller PM2.5 and larger PM10) set in the EU Ambient Air Quality Directive (AAQD). The study predicted that full compliance with the directive across all EU countries would not happen until 2030, which is “considerably later” than the 2020 date proposed in the Clean Air Policy Package.

NO2 remains a particular problem, according to the report. The AAQD required member states to reduce their mean average NO2 concentrations to less than 40 µg/m3 a year by 2010. However, progress towards this goal was delayed when countries were later allowed to request a five-year extension to comply.

The study found that in 2014, 18 countries – including France, Germany, Italy and the UK, which had all applied for an extension – still had concentrations above 40 µg/m3. Researchers highlighted London and Milan in particular as “NO2 hotspots” due to diesel vehicles.

According to the study, “a complete ban” on diesel vehicles in inner-city areas – as well as greater support for public transport – is now required for failing member states to comply with the directive. However, researchers acknowledged that banning diesel vehicles would require a “huge effort” from policymakers as they would need to reverse “tax privileges” passed during the years of diesel promotion.

The study also noted that this move might not be enough to tackle the problem while the EU continues to delay the introduction of real-world driving tests, which were demanded by NGOs following the Volkswagen scandal.

The study also revealed a number of different causes for pollution across Eastern European hotspots. For example, in Krakow, Poland, and Plovdiv, Bulgaria, traffic pollution was not the only reason these cities breached limits for PM10. Pollution from domestic heating was also responsible, prompting researchers to recommend that these cities ban the burning of solid fuel and introduce state-subsidized renovation of heating appliances.

12. Asthma Drives Clean-Air Plan of London’s New Mayor
London Mayor Sadiq Khan announced plans to crack down on air pollution, saying his own adult-onset asthma has increased his commitment to tackle a problem that accounts for the premature deaths of almost 10,000 people in the U.K. capital each year.

Khan, who was elected last week, plans to extend London’s “ultra-low emissions zone” to include the North and South Circular roads, to increase the congestion charge in central London for the most polluting vehicles and to give the green light to a Transport for London program to scrap diesel vehicles.

“I know from personal experience that the city’s air is damaging people’s health as I only recently started suffering from asthma as an adult,” Khan said in a May 13 statement. “In the past, London has only responded after an emergency, like with the Clean Air Act, which followed the great London smogs of the 1950s. But I want to act before an emergency, which is why we need big, bold and sometimes difficult policies if London is to match the scale of the challenge.”

The U.K. has long struggled to clean up the air in its cities and faces legal action demanding an acceleration of plans to rein in dangerous pollutants. A May 12 World Health Organization report said London was among 41 out of 52 U.K. towns and cities monitored that breaches safe levels of so-called PM-10 particles, and one of 11 that fails to meet standards on even smaller PM-2.5 particles. The pollution has been linked to respiratory problems such as asthma.

“This is a hugely positive announcement from the new mayor and shows clear ambition to clean up London’s dirty air,” said Alan Andrews, a lawyer at ClientEarth, the London-based environmental law organization that is suing the government over its air quality. “We welcome his plans to extend the ultra-low emissions zone and to bring it in earlier. This is vital if we are to take the dirtiest vehicles out of London.”

Khan, who asked for feedback to his proposals, said TFL, the capital's transport agency, will “lead by example” by adopting strict emissions standards for double-decker buses earlier than scheduled, using the cleanest vehicles in pollution hot spots and buying only hybrid or zero-emission buses from 2018.

He cited research by the Environmental Research Group at King's College London, published last year, which found that nitrogen oxide and pollutant particles in the air resulted in the loss of 140,743 “life-years” for Londoners, equivalent to 9,416 premature deaths in 2010.

London has worse air pollution than Berlin, Chicago and Paris, according to a report commissioned by the Greater London Authority. Paris this week started banning cars along its Champs-Elysees on the first Sunday of every month, while vehicles in Berlin must carry colored stickers showing the pollution class they belong to. Only vehicles meeting certain pollution standards may drive in the designated environmental area.

Khan was accused this week of backtracking on his pledge to be London's greenest mayor, after withdrawing a key obstacle to the expansion of London City Airport. He dropped the Greater London Authority's objection to the airport's planned purchase of land that it will need for the expansion, if the proposal is approved by the government later this year. Sian Berry, a Green Party London Assembly Member, described the move as “a terrible decision.”

13. VW Scandal Fallout Continues
VW Receives Regulatory Approval for Fixes on 1.1 Million Cars

Volkswagen has announced that it received regulatory approval to fix another 1.1 million cars, raising the number of VW models cleared for refitting to more than 2.5 million since the start of the year. Germany’s motor vehicle authority KBA has approved fixes for VW brand models, VW commercial vehicles and Audi luxury cars including the Tiguan SUV and Caddy model with 2.0 liter TDI EA 189 engines, the carmaker said.

VW said the KBA has confirmed that the fixes would not result in any changes to fuel consumption, performance or noise emissions of the affected cars.

The latest approval follows the KBA’s recent ratification of technical solutions for more than 800,000 of the 8.5 million VW cars affected by its diesel emissions scandal in Europe.

Matthias Müller: We Have Launched the Biggest Change Process in Volkswagen’s History

“TOGETHER - Strategy 2025”, the Company’s vision for the next decade, was presented to shareholders for the first time at the 56th Annual General Meeting. Speaking to around 3,000 shareholders in Hanover, Müller reaffirmed:

- multi-billion euro investment in an “electrification initiative second to none in the industry”
- Autonomous driving, digitalization and new business fields such as mobility services are also focal areas
- Volkswagen Group will successively equip new TSI and TFSI engines with gasoline particulate filters from June 2017
- Recall gathers speed with approval from the Federal Transport Authority for more than 3.7 million vehicles
- The Group is to become a model for a modern, transparent and successfully company in terms of “Integrity & Legal Affairs”

Diesels More Polluting Below 18C, Research Suggests

Pollution from many popular diesel cars is much worse when it is colder than 18C outside, new research suggests. Testing company Emissions Analytics told the BBC it has measured a significant rise in poisonous gas emissions from a wide range of models as the temperature drops.

It found the problem is worst among the Euro 5 category of cars, which became mandatory in 2011.

The firm tested 213 models across 31 manufacturers.

The finding means millions of vehicles could be driving around much of the time with their pollution controls partly turned off. But it seems many cars are deliberately designed that way and it is all perfectly legal.

European rules allow manufacturers to cut back on pollution controls as long as it is to protect the engine. Engineers agree that hot and cold weather can damage components. But some suggest car companies are taking advantage of the rule to switch things off, even in mild weather, because it improves the miles per gallon of the car.
"I would say from the Euro 5 generation of cars, it's very widespread, from our data. Below that 18 degrees [Celsius], many have higher emissions... the suspicion is, to give the car better fuel economy," Emissions Analytics CEO Nick Molden told the BBC.

"If we were talking about higher emissions below zero, that would be more understandable and there are reasons why the engine needs to be protected. But what we've got is this odd situation where the [temperature] threshold has been set far too high, and that is a surprise".

Carmakers insist it is to stop the vehicles breaking down.

There are currently 5.1 million Euro 5 diesels on Britain's roads and they are likely to be driving around for another 10 to 15 years.

The Emissions Analytics data found the average Euro 5 vehicle was 3.6 times over the legal limit for poisonous Nitrogen Oxides (NOx) when it was above 18C. But that increased to 4.6 times over the limit, when the air temperature dropped.

The latest generation of Euro 6 cars, on sale from September last year, were better, he added. They averaged 2.9 times the limit above 18C, rising to 4.2 times the limit at lower temperatures, but the figures were skewed by three especially bad performers, Mr. Molden said, although he refused to name those cars.

Asked if millions of diesel cars are currently driving around for most of the year, not using their pollution cleaning systems at all Mr. Molden replied: "That is the suspicion, or they're using their emissions system at a reduced level".

Recent testing by the German, French and UK governments uncovered a similar trend. Many popular models polluted more when it was colder.

In Britain for example, experts checked the same Euro 5 Range Rover Sport early on a cold morning, and then later in the day when it had warmed up. Its pollution (NOx) levels nearly doubled when it was colder.

Jaguar Land Rover said it was a car that was engineered 10 years ago and had the best emissions equipment available at the time. It is not on sale any more.

Professor Ricardo Martinez-Botas from Imperial College London, the independent engineer overseeing the British tests, told the BBC that despite decades designing engines he was "shocked" at the higher pollution levels on the real road compared to the lab. He is calling for carmakers to be more open about what they do with temperature. "They need to be clear as to what strategies are employed," he said.

The German government has asked Opel, Mercedes, VW, Porsche and Audi to upgrade the software controlling emissions on around 630,000 European vehicles, including thousands in the UK.

Unlike in Germany though, the UK government hasn't asked car firms to make changes. A Department for Transport spokesman said: "The regulations are clear that temperature control devices can be justified to prevent engine damage, but we want to see action to ensure that manufacturers are only using these systems in limited circumstances".
Still, some argue that ministers are failing to get tough on powerful carmakers which employ lots of people in Britain.

Carmakers keep engineering details close to their chest, so we don't know for certain how any of their systems work and at what temperatures. They argue that this information is commercially sensitive and stress they haven't broken any rules. But there is some information available that gives clues:

- Vauxhall has been accused by German media of not using one of its diesel cleaning systems for 80% of the time on one model. It is something the company flatly denies. "Exhaust gas recirculation [the emissions cleaning system] remains active at temperatures below 17C, however, for physical reasons related to engine protection as permitted by the regulations, with differing rates", a spokesperson for the firm said. In other words it is on, but not at full strength below 17C.
- Suzuki said it is changing the software on 3,200 cars in the UK, all of which use Fiat engines, and added it is linked to temperature. Fiat could not provide numbers but did say: "As a voluntary measure, not mandated or requested by any regulatory authorities, FCA will be updating its Euro 6 calibrations with new data sets to improve emission performance in real driving conditions".
- Renault is offering anyone with a car bought from September last year to July this year a software upgrade that will double the temperature range of the emissions system.
- And Mercedes say they will adjust around 26,000 A class and B class models in the UK, all with Renault engines and it will lower NOx levels.
- Ford says its system works normally until it gets to -10C outside.

European regulations will begin to get much tighter from 2017 although they will not be fully in place until 2021. Mike Hawes says it will get rid of this temperature issue completely.

What it will not do of course, is deal with the millions of cars driving around for the next 15 years that could be affected.

Pollution is a balancing act. The down side of cutting NOx gases is that the engine uses more fuel. The more fuel you use, the more carbon dioxide the car puts out and that's a greenhouse gas that harms the planet.

Emissions Analytics found that, in 2015, average mpg dropped for the first time in years. Probably because the car firms are concentrating more on cleaning up NOx. "That is evidence that the tightening emissions regulations are having a negative effect on mpg," Mr. Molden says. Although he thinks vehicle engineers will eventually find a way around the problem.

Pollution has been linked to heart attacks, strokes, breathing problems and premature babies. There is a suggestion that children going to school near busy roads may develop smaller lungs. Professor Frank Kelly at King's College London has been calling for tighter rules for years, especially with diesel vehicles. "On average we think pollution is probably taking away about six months of life for the average British citizen," he says.

*European Commission Warned Of Car Emissions Test Cheating, 5 Years before VW Scandal*
Documents seen by the press show that the commission’s in-house science service told it in 2010 that tests had uncovered what researchers suspected to be a “defeat device” that could cheat emissions tests. The director of the EU’s enterprise department claimed in April that the commission’s science service, the Joint Research Centre (JRC), had failed in previous reports to flag up the risk of such defeat devices.

But a report sent from the research center to the directorate as far back as 2010 warned that its testing had found potential cheating by a car-maker. “One vehicle tested showed extremely high NOx emissions during the low temperature type 6 test,” it said. “Since NOx emissions at low temperature are currently not regulated, this observation hints towards a very peculiar combustion strategy (defeat strategy?) the manufacturer applies at low temperature.”

The device kicked in immediately after the “light off” of the catalytic converters and involved an “artificially lean combustion strategy reducing HC/CO (high hydrocarbon/CO output) but increasing NOx emissions”.

It is not known which car maker was involved in the suspected test cheat but experts told the press that the description bore the hallmarks of a “thermal window” defeat device, software used by numerous car manufacturers. According to the campaign group Transport and Environment, the program turns off the cars’ exhaust after-treatment systems at outside temperatures of about 17C. It has only recently been discovered and is already highly contested.

JRC scientists told the European parliament’s ‘Dieselgate’ inquiry that they were never given a mandate to investigate the defeat devices issue further. But a note from the EU’s environment department (DG Envi) in 2010 said that work on “defeat strategies” was “an important concern” for them.

In 2013, an air pollution study by the department warned of: “Increasing evidence of illegal practices [by car manufacturers] that defeat the anti-pollution systems to improve driving performance or save on the replacement of costly components.”

As such, the documents trawl, obtained by the Dutch environmental magazines Down to Earth and OneWorld and shared with the Guardian, casts serious doubt on the European commission’s competence in handling the issue.

Kathleen van Brempt, the chair of the Dieselgate inquiry, said that the papers were “shocking” and raised questions about the future of commission officials. “These documents show that there has been an astonishing collective blindness to the defeat device issue in the European commission, as well as in other EU institutions,” she told the Guardian.

Seb Dance, the inquiry’s coordinator, said that they “completely contradict everything the commission has told us up to now about their having had no evidence of defeat strategies being used by car manufacturers.”

In April, Daniel Calleja Crespo, the director of the EU’s enterprise department, told the Dieselgate inquiry that, despite being aware that vehicles’ real-world NOx emissions were much higher than in test conditions, the commission “did not see there was cheating going on”.

But in November 2014, a year before the VW scandal, he had received a plea from DG Envi’s then-director, Karl Falkenberg, for a response to his calls for an EU probe into defeat devices. “We continue to believe that DG Enterprise should investigate the regularity – and, if confirmed,
demand corrective action – of certain current practices [in which] certain manufacturers deploy emission abatement techniques that are switched off at low temperatures or when the vehicle needs additional power,” Falkenberg said. “This practice in our opinion goes beyond what is allowed by the Euro 5/6 [emissions test] legislation,” he wrote in the letter. “A request to look into this matter more deeply has remained unanswered so far.”

Crespo did not answer it in his response. He said: “Regarding the application of different strategies during the type-approval test and in real driving conditions, such practices are illegal in accordance to the European law and any manufacturer applying them would face severe legal consequences.”

But experts say that the commission had the power and, arguably, a responsibility to alert member states to the defeat devices issue. It could also have informed its legal services department and contacted car manufacturers to ask whether their cars were causing a serious environmental problem that necessitated their recall.

One letter released in the trawl, from the Dutch environment minister to the EU’s industry commissioner in September 2015, says: “We would like you to consider the possibilities of a European recall … to ensure that all faulty software is removed from the market and replaced by proper software that allows proper emissions reduction.”

“The commission should have alerted the member states’ national supervisors,” van Brempt said. “Although it is not obliged, those states could have taken cars off the road, tested them and enforced the legislation.”

Crespo displaced Falkenberg last September, and is now the bloc’s most powerful environment officer, after Karmenu Vella, the EU’s commissioner for the environment.

A commission spokesperson said that the bloc had known about the risk of defeat devices in 2014, but “was not aware of any actual instances of fraud. We were just as shocked as everyone about the revelations of the Volkswagen emissions manipulation.” The official added that it was common knowledge that lab tests did not reflect real-world NOx emissions, which were up to 20 times higher, but that this could have been due to many factors. “No concrete evidence on the use of defeat devices or of the failure of a member state to act was ever brought to the attention of the commission,” she said.

However, another EU source was less sanguine. “The commission’s position in this has been one of trying to avoid any responsibility,” one told the press. “Legally, the responsibility for enforcement of the legislation rests with member states. Whether the commission did enough to alert those states and ensure that they were carrying out their responsibilities is a very pertinent question.”

VW Says Diess under Investigation, Sees No Evidence of Market Manipulation

Volkswagen brand chief Herbert Diess and former VW Group CEO Martin Winterkorn are under investigation over suspected market manipulation related to the automaker’s diesel-emissions scandal, according to press reports. Diess and Winterkorn are the target of a probe over whether they could have warned of potential financial losses related to the scandal earlier than they did, the news agencies Reuters and DPA said.
The prosecutor's office in Brunswick, Germany, in VW's home state of Lower Saxony, confirmed that Winterkorn is under investigation. It said a current board member also is under investigation but declined to name the executive.

The probe centers on "sufficient real signs" that the company's duty to disclose the possible financial damage of its emissions manipulations may have arisen prior to Sept. 22, 2015 when the carmaker publicly admitted to its wrongdoings, the prosecutor's office said.

The offense of market manipulation carries a penalty of up to five years in prison or a fine. The probe was prompted by charges filed by Germany's BaFin financial regulator.

Current VW Chairman Hans Dieter Poetsch, the company's finance chief at the time, is not being probed, the prosecutor's office said.

VW said the new probe does not provide fresh facts that indicate a possible severe neglect of duty by the accused managers. The company said in a statement that its own legal examinations have not brought to light a clear and severe breach of duty by current or former members of the management board.

VW acknowledged in its annual report on April 28 that it had not grasped the potential impact of its diesel emissions scandal until last summer when it realized that software in its cars may have violated U.S. environmental law. "According to the assessment at the time by the members of the Board of Management dealing with the matter, the scope of the costs expected as a result by the Volkswagen Group was basically not dissimilar to that of previous cases in which other vehicle manufacturers were involved, and therefore appeared to be controllable overall with a view to the business activities of the Volkswagen Group," VW's annual report said.

Because similar cases had been resolved amicably with U.S. authorities, the Environmental Protection Agency's Notice of Violation issued on September 18, 2015 came as a surprise, VW said, adding that the "facts and financial consequences then presented the situation in a completely different light."

Winterkorn quit as CEO last September after the company admitted to cheating U.S. emissions tests and disclosed that manipulated software used to rig tests had been fitted in up to 11 million diesel vehicles worldwide. VW hired Diess, a former BMW development chief, last July to turn around the troubled VW namesake brand.

VW has set aside 16.2 billion euros ($18.4 billion) to pay for legal and other costs, and prosecutors are looking into allegations against 17 individuals potentially involved in the manipulation.

Germany to Retest 30 Cars for High CO2 Levels

When Germany initially tested diesel cars for defeat devices after Volkswagen Group admitted to manipulating engine management software to cheat tests for NOx pollutants, officials were surprised that many of the cars showed high levels of CO2. "Out of 53 cars tested for illegal software, 30 were showing inexplicably high CO2 emissions. The experts are now looking into this," a spokeswoman from the German transport ministry told reporters.

The ministry did not say which cars will be retested and which brands they came from. The KBA motor transport authority said in November that it was testing cars from major automakers
including VW Group brands, Ford, Opel, BMW, Mercedes-Benz, Fiat, Renault, Peugeot and Toyota.

The committee will present a CO2 report following the results of these tests, the spokeswoman said.

The KBA has found that only VW Group used a defeat device but it is investigating techniques used by automakers to tweak engine performance in a way that results in high emission levels outside test conditions.

Germany Asks Opel for More Information in Zafira Emissions Probe

General Motors' Opel division has admitted that its Zafira model has engine software that switches off exhaust treatment systems under certain circumstances but says this is legal, German Transport Minister Alexander Dobrindt said. A German investigating committee that met Opel officials asked them to provide it with more information to help with their investigations into carbon dioxide emissions (CO2) from its cars, Dobrindt said after the meeting.

Opel confirmed during the meeting that the exhaust treatment systems shut down under certain speed and air pressure conditions in order to protect the car engine, Dobrindt said. "The investigating committee has doubts about whether this practice is completely justified by the protection of the engine," he told a news conference after the meeting.

The case is distinct from the emissions case involving German carmaker Volkswagen which concerned the rigging of exhaust emissions tests as opposed to exhaust treatment systems being shut down under certain conditions.

"The accusations concern control of the emissions treatment with the Opel Zafira relating to the revolutions, the air pressure and the speed," Dobrindt said. "Opel promised complete cooperation at today's talks," he added, saying this would include access to the relevant software. The Commission gave Opel 14 days to provide it with appropriate technical information.

"We also asked whether there were similar measures or elements with the Astra as we discussed with the Zafira," Dobrindt said, adding that the carmaker had been unable to provide detailed information on the Astra but would do so subsequently.

Opel was summoned to appear before the investigative committee following media reports this month about suspected emissions rigging.

Opel said it was fully cooperating with the checks. "I reiterate that our engines conform to the law and do not use illegal software," Opel Chief Executive Officer Karl-Thomas Neumann said.

"We at Opel do not use any illegal software. The German government wants to check this. We will fully support this," an Opel statement said. An Opel spokesman declined further comment.

Dobrindt said Wednesday's meeting began with Opel telling the investigators how it interpreted the relevant law. "We then presented our legal analysis," he added. "Differences were apparent."

VW's European Recall Takes Longer Than Planned As Only 50,000 Cars Fixed
Volkswagen will need more time to fix 8.5 million cars in Europe affected by the diesel emissions scandal as only 50,000 models equipped with illicit software have been repaired so far. The German carmaker began a European recall of models in late January. It said in February that software updates on the affected 1.2-litre, 1.6-litre and 2.0-litre vehicles, as well as hardware fixes for about a third of the 8.5 million cars, would be completed by the end of the year.

But Germany's KBA motoring regulator has since March held up a recall of VW Passats. A source at VW said the KBA was concerned that the proposed fix to make the cars comply with emissions regulations would lead to an increase in fuel consumption for the Passat.

VW sales chief Fred Kappler said the carmaker is counting on the KBA approving technical solutions for the Passat in coming weeks. He said that the majority of the 8.5 million cars could be repaired in 2016 but an unknown number of vehicles would not be fixed until next year. Kappler noted that the German transport regulator had so far approved fixes for the VW Golf and Amarok and the Audi A4 and A5, among other models.

VW remains mired in its emissions test-rigging scandal four months after its European recall got underway. It had hoped that a swift completion of vehicle repairs in its home region could serve as a precursor to recovering from the crisis.

**Norway Wealth Fund to Join Class Suit Against Volkswagen**

Norway's $850 billion wealth fund will seek to join a class action lawsuit in Germany against Volkswagen AG following revelations the automaker rigged the exhaust systems of 11 million diesel-powered cars worldwide to pass official emissions tests.

Norges Bank Investment Management “intends to join a legal action against Volkswagen arising out of that the company provided incorrect emissions data,” fund spokeswoman Marthe Skaar said in a May 16 statement. The fund, which according to press reports owns 1.64 percent in Volkswagen, said it is acting “to safeguard” its holding in the automaker. “It's the board's responsibility to ensure accurate and timely information is disclosed to the shareholders,” she said. “Volkswagen informed the public about the incorrect emissions data after U.S. authorities released a notice of violation letter.”

The NBIM is estimated to have suffered big losses on its Volkswagen stake after the car maker admitted it had cheated on its emissions test. The scandal led to the biggest earnings loss in Volkswagen history last year, with the company setting aside $18.2 billion to cover the costs.

“Something this big doesn't just go away quickly and the costs are spiraling,” said Joe Rundle, head of trading at ETX Capital, in a note. “And if the Norwegian fund is suing VW because the company's actions led to losses on its investment, then it could open to door for other shareholders to seek redress,” he added.

TCI Fund Management, an activist investor, this month sent a letter to the automaker's board, criticizing the company for what it deems excessive pay in light of poor stock performance even before the emissions scandal emerged.

**14. Dieselgate Analysis Finds ‘Three New Defeat Devices’**
Green group Transport and Environment (T&E) said it has identified three new car emission defeat devices after analyzing government investigations by Germany, France and the UK into the Dieselgate scandal.

T&E said that one government probe had “found but ignored” a ‘thermal window’ defeat device that switches off pollution control technology in low ambient temperatures. The cheat was identified in an analysis by the International Council on Clean Transportation, which informed the US Environmental Protection Agency about Volkswagen’s devices last year.

The investigation also found a ‘hot restart’ cheat, which enable the car to produce higher emissions after a warm engine restart because EU law only requires tests for cold restarts.

T&E highlighted a third defeat device, where some car models switch off the exhaust treatment system two minutes after the lab test has finished.

Julia Poliscanova, air quality manager at T&E, said: “The discovery in Europe of three new defeat devices, on top of Volkswagen’s, must now be followed by more comprehensive investigations to force carmakers to come clean on their emission strategies.

"Binding and strict EU guidelines for national testing authorities on the use of exemptions for defeat devices are also needed. In the US emissions control is allowed to be reduced only in temperatures below -3°C."

15. EPP Group Denounce Refusal of Key Witness to Testify In EMIS

“It is unacceptable that former European Commissioner Günter Verheugen refuses to appear in front of the European Parliament’s Inquiry Committee on Car Emissions. Without the testimonial and answers from the star witness, the work of the Inquiry Committee will become futile”, said the EPP Group Spokesman in the Inquiry Committee into Emission Measurements in the Automotive Sector (EMIS), Krišjānis Kariņš MEP.

The presence of former Commissioner Verheugen in the committee is crucial for the understanding of the making of EU automotive legislation from 2004 and onwards. These were defining years for the current rules for vehicle type approval and car emissions tests and thus constitute the main evidence for the committee.

“It is of the utmost importance that Günter Verheugen attends the hearing and, as the Chair of the committee is not able to convince him, the EPP Group will demand that the President of the European Parliament, Martin Schulz, personally intervenes”, Kariņš continued.

The EPP Group continues to work constructively in the committee, despite the risk that its work is devalued. “I urge the European Parliament to work fast and efficiently on real solutions to the challenges with diesel engines and cars, and that is the adoption of a new proposal on type approval, the real driving emissions test (RDE)”, Krišjānis Kariņš concluded.

16. German Minister Slams Fiat for Not Showing up At Emissions Meeting

German Transport Minister Alexander Dobrindt has criticized Italian carmaker Fiat Chrysler Automobiles for not showing up for a recent meeting to discuss emissions irregularities of its diesel vehicles. The company was expected to attend the meeting to discuss the issue, but Fiat canceled the appointment by sending a lawyer's letter, Dobrindt said in a statement.
"This uncooperative behavior of Fiat is completely incomprehensible," the minister said, adding there were concrete allegations about irregular emissions of Fiat cars.

An investigating committee of the ministry has doubts on whether Fiat is meeting all requirements of type-approval legislation for its vehicles, he noted. "It would be appropriate if Fiat would take a stand on this in front of the investigating committee," Dobrindt said.

The German KBA authority will now send documentation with measurement results to its Italian counterpart. "The Italian authorities must consider whether the rules have been respected," Dobrindt said.

In Rome, Italian Transport Minister Graziano Delrio said German authorities should address the issue by contacting Italian car regulators and not the company directly. Delrio said he had sent a letter to Dobrindt, making clear that discussion on Fiat vehicles emissions must take place between the two national emissions authorities.

Fiat concluded it only needed to answer to its own type-approval authorities at home in Italy - an attitude that German automakers would likely also have adopted if the situation was reversed.

For years the transportation ministry and its type-approval agency, the KBA, bent over backwards for domestic automakers including Volkswagen. Germany’s TUV Nord, an independent testing agency, complained it could not inspect engine management software after legislators agreed with the industry’s argument that the bits and bytes controlling tailpipe emissions are corporate secrets.

The KBA retroactively reclassified the homologation for a revamped Mercedes A class as an existing rather than new model to allow the Europe-wide sale with a phased-out refrigerant banned under EU rules.

All of this would have been avoidable if the EU had been in charge of what is a single market issue. EU governments - especially heavyweights like Germany - should agree to the establishment of a single, independent authority to test vehicles in the bloc similar to the U.S. government's Environmental Protection Agency.

The Brussels-based Transport & Environment group is lobbying for this. Otherwise the regulatory arbitrage that T&E’s air quality manager, Julia Poliscanova, this week called a "race to the bottom" among national regulators will continue.

17. Industry Calls for Fuel Efficiency Standards for Trucks

Strict fuel efficiency standards for new trucks in Europe must be introduced to help member states achieve Paris agreement targets, according to an open letter from industry and NGOs. The letter, sent to European Commission president Jean-Claude Juncker, said that the transport sector has an important role to play in reducing CO2 emissions by 40% by 2030, as set out in the Paris agreement.

But it warned that current proposals to test and monitor truck emissions do not go far enough and urged the Commission to propose introducing fuel efficiency standards within the next two years, using the upcoming decarbonization of transport communication as a platform.
The 19 signatories include major firms such as IKEA, Deutsche Post DHL and Kingfisher, and NGO Transport and Environment (T&E).

The letter said: “The companies that sign this letter are aware of their responsibility and are willing to scale up their commitment to help the EU meet its ambitious climate goals. “However, this is a challenge business cannot meet alone and policymakers need to create the right environment for this transition to take place. One area where the EU can make a major contribution is the fuel efficiency and CO2 emissions of new trucks.”

The letter said that “despite progress on reducing pollutant emissions, thanks to the EURO-standards, new truck fuel consumption has remained stable for almost two decades”.

Heavy goods vehicles account for less than 5% of all traffic on the roads but they are responsible for 25% of road transport’s fuel use and carbon emissions. The letter said that legislative pressure, in the form of new standards, would help to “kick start the market for ultra-fuel efficient trucks in Europe”.

William Todts, freight director at T&E, said: “Commissioner Cañete has said truck CO2 standards are essential and he’s right. More fuel efficient trucks will save haulers money, boost the economy and protect the environment. It’s time for the Juncker Commission to follow the example of the US, China and Japan and set ambitious truck fuel economy standards.”

Bart Vandewaetere, Nestlé’s assistant-vice president relations with European institutions, said his company was already working with its supply chain partners to cut fuel consumption and greenhouse gas emissions from transport by another 10% by 2020 (versus 2014), on top of reductions the firm has already made. “We are doing this by efficiency optimizations such as routing, avoiding empty runs and using our vehicles at maximum capacity.

“Increasing the fuel efficiency of trucks will give the transport industry the required boost to further reduce overall CO2-emissions after 2020, when most of the other options have been fully exploited,” Vandewaetere added.

Ewald Kaiser, chief executive of DB Schenker Europe and member of the board Land Transport, said: “Political framework decisions should provide balanced incentives for best-in-class performers to drive innovation.”

18. Nissan Eyes 20-Percent EV Sales in Europe by 2020

Gareth Dunsmore, Nissan’s European electric vehicle division head, is forecasting that 20-percent of its vehicle sales will be electric by 2020. “We’re committed to zero emissions and I passionately believe that’s where [our lineup] is headed. We believe that by 2020, where the market conditions are right, we’ll be selling up to 20-percent of our volume as zero-emissions vehicles.”

Dunsmore cited the world’s highest-percentage consuming PEV market as an example.

“If you look at Norway, that’s the case there today,” he said. “In March, six-percent of sales in the whole of Europe were electric vehicles — the Leaf and e-NV200. The tipping point is starting to happen, and it’s going to happen city by city, country by country.”
“This gradual pace of change means we’ll still build vehicles for everyone, but step by step you’ll see the electrification of the Nissan range and you’ll see us heading towards a zero-emissions future.”

Dunsmore’s prediction is parallel to one made by Nissan corporate officer Hiroto Saikawa last December at the automaker’s Yokahama, Japan-based headquarters. Saikawa told reporters that Nissan is intensifying its electrification and will boost EV sales by 10 percent by the end of the decade.

Saikawa said two factors would make EVs go mainstream by 2019/2020:

- First is worldwide strict greenhouse gas emission targets will begin to go into effect by 2020, which can only be met by a substantial increase in electric vehicles.
- The other factor is batteries that are affordable and capable with the potential of 250-mile range will be ready at this time.

Dunsmore also said improvements were needed from ‘the cradle to the grave’ for electric vehicle technology. “We’re continuously evolving what metals we’re putting into the battery, but you’ve got to remember it’s also about how you manage that battery once it’s finished its life within the car. “We believe the battery will outlast the life of the car, and it’s about reusing that battery afterwards, rather than recycling.

19. Nissan’s Electric Cars in UK Trial to Sell Surplus Power

Nissan is to launch a trial this year to allow electric car owners in Britain to sell electricity back to the National Grid and potentially make money in the process.

Major car makers are investing heavily in electric cars and in Europe many countries have incentive schemes to get more people to buy them, including Norway, the Netherlands, France and Britain. Around 3 percent of cars sold in Britain last year were alternative fuel models - primarily plug-in hybrid and electric cars - but sales have risen 24 percent so far this year, with manufacturers seeking to attract buyers in an increasingly competitive market.

Nissan said that its trial with multinational power company Enel would be the first of its kind in Britain and involve 100 vehicle-to-grid units for private and business customers, which will allow them to sell back electricity to energy system operator National Grid.

"The value to the consumer is they can draw energy off-peak, so during the night," chairman of Nissan Europe Paul Willcox told reporters. He said people could use that energy to power the car or use it to sell it back to the grid during peak time when they can make some revenue.

Nissan, which built almost a third of Britain's total car output last year, said private and fleet owners of its compact Leaf model and e-NV200 electric van would have the chance to take part in the trial later this year.

Britain's National Grid could face an increase in demand if electric cars become more widespread, but it could also benefit from the Nissan program if it encourages more consumers to reduce their power use during peak times.

National Grid has had to take steps to secure the country's energy supply following closures at coal-fired plants due to environmental regulations, which have shrunk Britain's generating
capacity over the last few years. "It's our job to future proof the national transmission network," National Grid Non-Executive Director and former CEO Steve Holliday said. "The rapid uptake of electric vehicles is certainly positive yet could also be challenging if we don't plan ahead."

20. WHO: 33 of Europe's 50 Most Polluted Cities in Poland

Poland's reliance on coal continues to give the country some of the dirtiest air in Europe, a government spokesman told reporters recently. "We still exceed norms as regards generation of PM-10 and PM-2.5 particles," environment ministry spokesman Jacek Krzeminski said. "Emissions from coal-powered furnaces in private houses are the chief culprit."

About 88 percent of PM-10 particles (those smaller than 10 microns) are generated by coal-powered furnaces in private homes, while about 26 million vehicles in the country are blamed for 6 percent of the emissions; industry in Poland accounts for just about 2 percent of the PM-10 particles, Krzeminski said.

His comments came days after the World Health Organization released a report on the most polluted cities and towns in the European Union: 33 of the 50 most polluted EU cities are in Poland.

WHO declared the small town of Zywiec in southwestern Poland as the most polluted city in Europe? Zywiec has only two major industrial facilities—a beer brewery famous since medieval times and a plant producing medical tools. Most of the homes of its 33,000 residents are heated by coal. The annual average of PM-2.5 level in the city is 46 micrograms per cubic meter of air, while a safe level should be around 20, the WHO report said.

Antoni Szlager, mayor of Zywiec, told the press that he will use the report to push for more federal funds. "It is good that WHO published the report," he said. "I will file an application with the Environment Ministry requesting more funds to decrease pollution in my city."

Katarzyna Guzek of Greenpeace said that she was not surprised by the report. "We have urged the government to depart from coal for years and to focus more on renewables, but our signals were ignored," Guzek said.

21. London Panel Shares Environmental Pros, Cons to Brexit

If the U.K. leaves the European Union after a referendum next month, a future government could decide to roll back some of its tougher environmental regulations to gain a competitive advantage, according to the head of the Brussels-based Institute for European Environmental Policy. Another potential downside to the U.K., if voters opt on June 23 to leave the EU, could be that the U.K.—like Norway, which is not in the EU—would still "have to comply with most of EU" environmental regulations "but have no role in making the legislation," IEEP Executive Director David Baldock said.

Baldock highlighted the two possible scenarios for the U.K. "Brexit" from the 28-nation bloc during a May 9 debate in London organized by the Crowd Forum.

Caroline Lucas, a Member of Parliament for the Green Party, argued that the U.K. was far more effective working in collaboration with neighbors. "When a significant chunk of our air pollution comes from the continent," it is clear that "we can't solve this alone," Lucas said. "Environmental problems do not respect borders. If the EU didn't exist, we would have to create it." By working
together with other countries, the EU can “avoid duplication, pool limited resources, and increase coordination,” she said.

Michael Liebreich, chairman of Bloomberg New Energy Finance, said he “challenged the notion that all good environmental things come out of the EU.” The U.S. for instance, has unilaterally “made more progress on phasing out coal than the EU,” Liebreich said. He said Germany touts its renewable energy technologies, but its carbon emissions “have not budged” in the past 17 years.

And “what happens when EU tried to reduce emissions on cars?” he asked, referring to German Chancellor Angela Merkel’s 2013 remarks that any agreement to reduce vehicle emissions should take into account the interests of automakers balanced against the environmental objectives of the regulation.

“It's all very well to claim environmental leadership in Europe, but we have to judge on acts and deeds,” Liebreich said, claiming that the EU has spent “less than half of what China is investing in clean energy.”

**22. Paris Bans Pre-1997 Cars from Its Streets During Weekdays**

Parisiens with cars built before 1997 are going to need to head to the nearest car dealership if they want to keep driving in the city after July 1. The French capital has experienced quite horrific air pollution in the last few years, and there was a massive spike in March 2015 that saw the city's air quality drop poorer than that of Beijing, China. After trying out temporary restrictions to vehicle traffic, *Les Echos* reports that the city has decided to implement new rules that will ban older and more polluting vehicles from its streets on weekdays. Those restrictions will also tighten over time; in 2020, only cars built since 2011 will be allowed.
The vehicle classification scheme means you get one of these window stickers based on which Euro emissions standard your vehicle complies with.

This announcement follows a decision by the French government to finalize a nation-wide scheme of ranking vehicle emissions (the system is based on the European emissions standards). Any vehicle made on or before December 31, 1996 was built to conform to Euro 1, the weakest of these standards, and it's these cars that are no longer allowed in the capital. Pre-2000 motorbikes and other two-wheeled vehicles are also on the hit list.

Parisian drivers will need to register and get a window sticker. If you're caught in the city during the week with one of the banned cars, expect a fine of between $39 and $504 (€35-€450). The new rules follow a move last year that banned trucks registered before October 2001 from city streets during weekdays.

It's estimated that about 30,000 diesel and gasoline cars will be affected by the new rules. While the change will no doubt help Parisian air quality, the impact will most likely be felt by the city's least-well off drivers (as well as people with classic cars).

**23. International Veto Could Derail Use of EU ETS for Aviation**

EU measures to reduce CO2 emissions from aviation could face international scrutiny in the future, under a draft UN text for a global offsetting scheme to limit aviation emissions. As talks on the ‘market-based measure’ at the UN aviation body ICAO closed, observers were positive about the introduction of a review mechanism to periodically increase the ambition of the deal, and on progress toward developing offset criteria. But they also noted there was little progress on how responsibility should be shared between countries. If these disagreements undermine the strength of the deal overall, new provisions in the draft text may make it difficult for countries to prepare their own regional measures to tackle emissions.

Since 2012, intra-EU flights have been covered by the bloc’s emissions trading system (ETS) while talks at ICAO worked on a global deal to achieve carbon neutral growth for the sector beyond 2020.

But the latest draft of the global offsetting scheme, now being discussed under the name of the Carbon Offsetting Scheme for International Aviation (COSIA), suggests that regional measures such as ETS-regulation for aviation could be stopped “unless agreed otherwise between affected states”. If this text is agreed in October’s ICAO general assembly, where the deal is expected to be finalized, it would mean the EU has to seek international approval before continuing to use the ETS to reduce emissions from aviation.
Commenting on the close of the talks, MEP Julie Girling said: "Flexibility to allow an option for the internal EU ETS aviation scheme to continue is essential."

More widely, an ICAO document summarizing the talk’s ‘outstanding issues’ noted there are still a number of options under consideration for how responsibility is shared. As concerns rise that these issues will remain unresolved at subsequent ICAO meetings, a number of proposals have been made for an ‘implementation phase’ which would give countries more time to negotiate test procedures.

NGOs are concerned that this would effectively be a delay on the agreement’s start date, and could renege on the deal’s original aim to achieve carbon neutral growth for the sector from 2020.

There is a final technical meeting next month before the ICAO general assembly begins in Montreal on 24 September.

### 24. Greenpeace Publishes Confidential U.S.-EU Trade Deal Documents

A sweeping free trade deal being negotiated between the European Union and the United States would lower food safety and environmental standards, Greenpeace said recently, citing confidential documents from the talks. But the European Commission said the documents reflected negotiating positions, not any final outcome, and the EU's chief negotiator dismissed some of Greenpeace's points as "flatly wrong."

The U.S. Trade Representative's office also rejected them. While it would not comment on the "validity of alleged leaks," a spokesman said "the interpretations being given to these texts appear to be misleading at best and flat-out wrong at worst."

Greenpeace opposes the proposed Transatlantic Trade and Investment Partnership (TTIP), arguing with other critics that it would hand too much power to big business at the expense of consumers and national governments.

Supporters say the TTIP would deliver more than $100 billion of economic gains on both sides of the Atlantic.

Greenpeace Netherlands published 248 pages of "consolidated texts" for 13 chapters, or about half, of the deal on the website TTIP-leaks.org. They date from early April, before a recent round of meetings in New York. "We've done this to ignite a debate," Greenpeace trade expert Juergen Knirsch told a news conference in Berlin, adding that the documents showed the negotiations should be halted. "The best thing the EU Commission can do is to say 'Sorry, we've made a mistake'."

European Trade Commissioner Cecilia Malmstrom called the leak a "storm in a teacup" and told an audience in Geneva the EU would not compromise its principles just to get a deal before U.S. President Barack Obama leaves office in January 2017.

"If it is not good enough we just have to say 'Sorry but we have to put this on ice' and wait for the next administration. Obviously we lose time and momentum but we cannot agree to TTIP-lite or something that's not good enough," she said.
The White House had no comment on the veracity of the documents but said the leak was unlikely to derail negotiations. "There is the potential, and we certainly are aiming, to complete these talks by the end of the year, and I don't think there's anything about this leak that is going to have a material impact on our ability to do that," White House spokesman Josh Earnest told reporters.

Greenpeace said the documents showed differences had become entrenched between the two sides of the Atlantic. Malmstrom said it was "not very dramatic" to say there were disagreements and the EU was being as open as possible about the negotiations.

Knirsch said the texts showed the United States wanted to replace Europe's "precautionary principle" - which prevents potentially harmful products from coming to market when their effect is unknown or disputed - with a less stringent approach. Malmstrom said the precautionary principle was part of the "acquis" - the laws binding the EU together - and Greenpeace's assertion was not true.

In Brussels, EU chief negotiator Ignacio Garcia Bercero dismissed Greenpeace's comments on the precautionary principle, adding: "We have made crystal clear that we would not agree on anything that implies changes of our regulatory regime on GMOs (genetically modified organisms)."

The negotiators aim to have "consolidated texts" by July, when a 14th round of talks is due to be held. They would then try to settle the thornier issues in the second half of 2016.

**25. UK's Heathrow Says Will Limit Environmental Impact of New Runway**

Britain's Heathrow Airport, seeking government permission to build a new runway, said it would comply with an extended ban on night flights and meet European air quality rules if the project gets the go-ahead. Heathrow is operating at full capacity and has been campaigning for 25 years for the green light to build a third runway, but political wrangling, objections from local residents in west London and environmentalists has prevented expansion.

A government-appointed Airports Commission last year named Heathrow, Britain's busiest airport, as the preferred site for a new runway in London, setting out a number of conditions to help win over opponents. Heathrow faces competition from Britain's second busiest airport Gatwick, south of London, which also wants to build a new runway.

Transport minister Patrick McLoughlin said in February that a decision on airport expansion could come by the end of July.

The issue is a divisive one for Prime Minister David Cameron's Conservative government, already split over next month's referendum on Britain's membership of the European Union.

Heathrow said on Wednesday that it would comply with all 11 conditions set out by the Airports Commission, including a key requirement on air quality which stated that new flights would only be permitted if air quality did not breach EU limits. Heathrow Chief Executive John Holland-Kaye wrote to Prime Minister Cameron to say that the airport's plan to comply with the Commission's conditions should help him back the project.

"We have acted now to let you and your government make the right choice. It will enable you to choose Heathrow," Heathrow said the CEO wrote in his letter to Cameron.
Under the proposals, Heathrow said that night flights would begin from 0530 local time, an hour later than at present, offering some respite to residents disturbed by the noise of planes flying over their homes.

British opposition Labour lawmaker Mary Creagh, who chairs parliament's Environmental Audit Committee, said that the airport needed to do more. "Heathrow's proposals to tackle air pollution need to go much further much faster. Promises on future rail links and air pollution charges are 7-10 years away," she said in a statement.

26. Neste Claims Renewable Diesel 90 Percent Lower Carbon than Regular Diesel

The lifecycle carbon emissions of renewable diesel fuel are significantly lower than those of conventional diesel, says a new study from a company that sells the renewable version. Neste's diesel fuel can be used in both cars and heavy-duty trucks. Today, it sells the renewable diesel in parts of Northern California.

The company recently analyzed the overall carbon footprint of its fuels and others. It looked at the "well-to-wheels" carbon emissions, including those related to its manufacturing process and found that the overall carbon-dioxide emissions for its renewable diesel averaged 10 grams per kilometer, compared to 100g per km for conventional diesel.

Gasoline was found to have somewhat higher overall emissions than conventional diesel.

The company claims its renewable diesel offers lower lifecycle carbon emissions even than grid electricity for battery-electric cars. It calculated an average of 28g per km for electric cars, likely on grids in Finland, Russia, and the Baltic states, where Neste currently operates on a large scale.

In the U.S., several studies have been undertaken to determine the emissions related to electricity generation for electric cars. The consensus seems to be that cars charged off the dirtiest, coal-fired grids have overall emissions comparable to those of the most fuel-efficient gasoline cars. However, those emissions drop significantly when cars are charged from cleaner grids that use lower-carbon energy sources.

Neste operates primarily in Europe, but the company is trying to break into the U.S. market. Last year, it sent a car across the country on a single tank of its NEXBTL renewable diesel fuel. The car—a Superlite Coupe powered by a 1.9-liter Volkswagen TDI engine—covered 2,507 miles on 37.6 gallons, averaging 67 mpg at an average speed of 68 mph.

Neste also claims NEXBTL isn't limited by the "blend wall" that limits the quantities of other types of biofuels that can be blended with petroleum products. While some trucks today are certified to use B20, or diesel fuel with 20 percent biodiesel, many diesel passenger vehicles remain limited to B5.

27. Member States Defy Car Lobby to Upgrade Car CO2 Test

The European Commission and member states have agreed a deadline for stricter testing of vehicle carbon emissions and fuel consumption, despite lobbying from the car industry to delay it. Member state representatives on the Technical Committee on Motor Vehicles voted in favor of a draft proposal on a timeframe for implementing the worldwide harmonized Light vehicles Test Procedures (WLTP). The existing test, the New European Driving Cycle, has been found to underestimate CO2 emissions from new cars by nearly a third.
Member states agreed details of the new test last year, but not a start date. If the European Parliament and Council give their approval, it will apply to all new cars and vans from 1 September 2017. From 1 September 2018, regulators will not be allowed to give type approval to any vehicles that do not comply.

Green pressure groups had accused the car industry of lobbying to delay the rules by a year, but most member states did not concede. T&E’s clean vehicles director Greg Archer congratulated industry Commissioner Elżbieta Bieńkowska and her team for “standing firm” on the issue. Ms. Bieńkowska herself said the new rules would benefit both consumers and regulators.

In a statement, carmakers’ lobby ACEA said it was “fully committed” to further reducing CO2 emissions and had already made significant improvements to the performance of new vehicles. But it said the 2018 deadline for all cars would add “extra complexity” in managing the introduction of the new tests.

Later in the month, the EU’s Climate Change Committee is expected to vote on changes to the EU’s 2021 CO2 and fuel consumption targets. These were set on the basis of using the current test, and need to be updated to account for differences in the two approaches.

The revised consumer test is just one aspect of vehicle regulation under revision in the wake of the Volkswagen Dieselgate scandal. In October, member states raised compliance margins in new on-road NOx emissions tests, known as real driving emissions (RDE), to replace laboratory testing. The RDE will apply, like the WLTP, from 1 September 2017, and the Commission expects manufacturers to already start designing vehicles for full compliance. But it will not apply to all cars until September 2019.

The Commission is also reviewing the type approval system - a network of national authorities that test emissions for compliance purposes – with increased market surveillance of emissions from cars already on the road and more financial distance between type-approval authorities and their responsible governments.

28. EU Focus on Lorry CO2 Data Is ‘Red Herring’, Says Former US Regulator

An upcoming strategy paper on decarbonizing transport will lay out a plan to propose a monitoring, reporting and verification (MRV) mechanism for lorry emissions in the first quarter of 2017, a European Commission official has revealed. The strategy paper will be published on 20 July the representative told delegates at the event in Brussels on 9 June, which was organized by NGO T&E.

However, the official would not say whether the strategy will outline a plan to introduce fuel economy standards for lorries. Such standards exist for cars and vans in the EU, but not for lorries.

Speaking at the conference Margo Oge, the recently retired director of the office of transportation and air quality at the US Environmental Protection Agency, said the Commission’s focus on MRV was a “red herring”. The Commission has insisted that it needs more data on emissions from heavy-duty vehicles before it can put standards in place. But Oge noted that the US put standards in place in 2011 without undertaking an MRV exercise first. They used the lorry and engine makers’ own data to develop the baseline for the US standards. “Do we have a perfect baseline? No. Do we need a perfect baseline? No,” she said.
At the same conference, the transport research group ICCT unveiled research showing that European lorries could reduce their fuel bill and cut carbon emissions by up to 40% by 2030 if the EU set CO2 standards now.

The fuel efficiency of trucks in Europe has stagnated over the past 20 years, the study found. Without action, heavy-duty vehicles will emit more than 40% of Europe’s road transport emissions by 2030. Because of the effect of the US limits, American trucks are set to be more fuel efficient than European trucks within a few years. Japan and China also have lorry standards in place.

European lorry makers currently dominate the world market and export to US Japan and China where they have to comply with market requirements, although they do make different models for different markets. Truck manufacturers in Europe wouldn't have to change their processes because MRV is just monitoring the fuel and emissions, but they would have to change if standards were put in place.

29. MEPs Endorse 30% Renewables Goal in Plenary Vote

MEPs have voted to support previous calls to raise the EU’s 2030 renewable energy target from 27%, as proposed by the European Commission, to 30%. At a plenary meeting, European Parliament members endorsed a non-binding resolution calling on the Commission to set a binding, EU-wide goal to generate 30% of energy from renewable sources. This could be achieved via targets set at member state level.

The support for increased ambitions comes months ahead of a review of the EU’s Renewable Energy Directive by the Commission, due before the end of 2016.

This latest resolution is the second to advocate a 30% renewable target for 2030. In February 2014, MEPs proposed the figure to the Barroso-led European Commission, which had recommended 27% instead. This target was retained by the Juncker cabinet that followed.

But in April 2016, rapporteur Paloma López Bermejo published a draft report where she insisted that a step-up to 30% was needed. López Bermejo’s view was endorsed by MEPs voting at the recent plenary, along with criticisms she made of the EU member states that are lagging behind with the 20% renewables target set by the Commission for 2020.

In particular, MEPs believe reaching the 20% milestone will be difficult for the UK, France, Spain, the Netherlands and Belgium, all of which were identified as struggling countries by researchers in early March. Getting these countries back on track, MEPs said, will demand country-specific recommendations from the Commission and greater access to capital.

30. EU GHG Emissions Fall by Almost a Quarter since 1990 but Not Transportation

The EU has slashed greenhouse gas (GHG) emissions by almost a quarter (24.4%) since 1990 and has cut them by 4.1% between 2013 and 2014, according to figures from the European Environment Agency (EEA). In its latest data, sent to the UN’s climate agency, the EEA revealed that GHG emissions in all 28 EU countries plus Iceland fell from 4,467 million tons CO2-equivalent (Mt CO2-eq) in 2013 to 4,282 Mt CO2-eq in 2014, the lowest figure since 1990.
The EEA said that the 2013-2014 drop in emissions, equivalent to 185 Mt CO2-eq, was caused by reduce demand for heating in EU homes during the warm winter and a boost to non-combustible renewables such as wind and solar power.

Between 2013 and 2014, emissions declined in every EU member state except for Spain, Cyprus, Malta and Bulgaria, where they experienced a minor increase. Longer term EEA country data for the 1990-2014 period reveals a different picture. The majority of EU countries managed to curb GHG emissions in that period, while Romania, Latvia and Lithuania managed to cut them by more than half. However, in Spain, Cyprus, Malta, Portugal and Ireland emissions rose.

According to the EEA, the 24.4% drop in emissions between 1990 and 2014 was mainly driven by electricity and heat producers, which slashed GHG output by 346 Mt CO2-eq in the period. They were followed by manufacturers and residential combustion, which cut emissions by a respective 299 and 140 Mt CO2-eq.

In contrast, emissions in the 1990-2014 period were found by the EEA to have risen in road transportation (a 124 Mt CO2-eq increase) and refrigeration and air conditioning (a 99 Mt CO2-eq increase).

EEA executive director Hans Bruyninckx defined the emissions dip since 1990 as a “positive, important step” towards the EU’s 2030 and 2050 climate targets. But he added that investments in technology and innovation are still needed to speed up decarbonization.

**NORTH AMERICA**

**31. U.S. EPA Biofuels Plan Disappoints Refiners, Farmers Alike**

U.S. regulators proposed a modest increase in the amount of corn-based ethanol and biofuels that fuel producers must mix into diesel and gasoline in 2017, disappointing two major industries: Big Corn and Big Oil. Unveiling the latest stage in its biofuels program, the Environmental Protection Agency called for 18.8 billion gallons to be blended into the nation’s fuel supply in 2017, up 4 percent from the 18.11 billion gallons set for this year. That includes 14.8 billion for conventional biofuels, mainly ethanol, up from 14.5 billion for this year, the EPA said.

As expected, the new total for the Renewable Fuel Standard (RFS) is well below the 24 billion gallons outlined in a 2007 law aimed at cutting U.S. oil imports and boosting renewable fuel use. Still the volumes represent “ambitious, but achievable” growth for the renewable fuels industry, the EPA reiterated.

Last year, the regulator said those Congressional targets were not realistic, acknowledging infrastructure constraints known as the "blend wall," the 10 percent saturation point for ethanol blended in gasoline. The new targets would push biofuels use well through that level toward 10.4 percent of total U.S. fuel demand. This could boost the program's cost to oil Refiners Valero Energy Corp and Tesoro Corp.

In response, prices jumped for biofuels credits companies use to prove they have met the requirements. The higher the targets, the higher the cost of compliance.

Low fuel prices have boosted demand by American motorists for diesel and gasoline, making it easier to reach the congressional targets.
Big Oil and Big Corn both criticized the EPA announcement, from opposing sides of the issue. The increase did not go far enough for the farm lobby and biofuels companies like POET LLC, which have spent millions to produce advanced biofuels. While going in the right direction, "they once again fail to acknowledge the existing capabilities of the biofuels industry and fuel retailers in meeting the (RFS) goals," said POET Chief Executive Jeff Broin in a statement.

Oil industry advocates, who have criticized previous targets as unrealistic, renewed calls for an overhaul of the program. "EPA's proposal makes abundantly clear that the only solution is for Congress to repeal or significantly reform the RFS," said the American Petroleum Institute's downstream group director Frank Macchiarola.

After years of delays, EPA unveiled the numbers weeks before many in the industry expected and more than six months before the official deadline to finalize the plan. "EPA has found its groove," said Michael McAdams, President of the Advanced Biofuels Association.

Still, the continuing lobbying battle between oil and farm interests should keep the RFS mired in controversy.

In November 2015, the agency unveiled a retroactive target for 2014 and the first for 2015 and 2016, triggering lawsuits from both Big Corn and Big Oil. "EPA has ensured that the debate will continue to look backwards at the fruitless fight between corn and oil," said Harvard University professor and former Obama Administration advisor James Stock.

The proposed volumes would represent growth over historic levels, EPA says:

- total renewable fuel volumes would grow by nearly 700 million gallons between 2016 and 2017;
- advanced renewable fuel – which requires 50% lifecycle carbon emissions reductions – would grow by nearly 400 million gallons between 2016 and 2017;
- the non-advanced or “conventional” fuels portion of total renewable fuels – which requires a minimum of 20% lifecycle carbon emissions reductions – would increase by 300 million gallons between 2016 and 2017 and achieve 99% of the Congressional target of 15 billion gallons;
- biomass-based biodiesel – which must achieve at least 50% lifecycle emissions reductions – would grow by 100 million gallons between 2017 and 2018; and
- cellulosic biofuel – which requires 60% lifecycle carbon emissions reductions – would grow by 82 million gallons, or 35%, between 2016 and 2017.

Biomethane, also known as RNG/renewable natural gas, has been classed in the same way as cellulosic ethanol for the past two years

“The Renewable Fuel Standards program is a success story that has driven biofuel production and use in the U.S. to levels higher than any other nation,” Janet McCabe, acting assistant administrator for EPA’s Office of Air and Radiation, said in an agency release.

“This administration is committed to keeping the RFS program on track, spurring continued growth in biofuel production and use, and achieving the climate and energy independence benefits that Congress envisioned from this program,” she said.
The agency will hold a public hearing on the RFS proposal in Kansas City on June 9. The period for public input and comment closes on July 11.

32. New Diesel Quality Rules Will Challenge Mexico's Pemex - Regulator

Mexican state oil giant Pemex has until 2018 to meet new fuel quality standards that will affect 40 percent of its diesel production that does not yet comply, the energy regulator said recently. Guillermo García, President of CRE, said the new rules, which should go into effect soon, will limit the sulfur content allowed in fuel, posing a challenge for Pemex, and tighten controls for everything from refining to sales.

"Pemex must comply to be able to remain [in the market]. If it doesn't comply with the rules, it will have to decide to export the product or stop producing," García said in an interview.

Pemex lost a decades-long monopoly over oil production in Mexico thanks to a landmark 2014 energy overhaul that also took away its exclusive right to import fuel.

García said that Pemex has projects ready to produce ultra-low-sulfur gasoline throughout the country. That is not the case for diesel. "In the case of diesel, it is just getting underway. They have already made investments but we are giving them until July 2018 to finish them," he said. "It is definitely a challenge for Pemex, but I can tell they are committed," he added.

Battered by the drop in oil prices, Pemex announced cuts of 100 billion pesos ($5.42 billion) that will affect its industrial arm, charged with modernizing refineries.

The Energy Ministry has granted gasoline import permits, but Pemex is still the only producer in Mexico. Its six refineries produced 275,000 bpd of diesel and 381,400 bpd of gasoline per day last year.

That is not enough for local consumers, so Mexico imports a growing amount of fuel each year, almost exclusively from the United States.

The new quality standard will allow maximum ethanol content in gasoline of 5.8 percent as an oxygenate, a percentage that will likely be kept on hold for a while, García said. "We are comfortable with that percentage. Some very dramatic, solid information would have to be produced for us to say 'let's raise it,'" García said. "We want to move forward with caution," he added.

33. SCAQMD Approves $52 Million to Improve Goods Movement Emissions

The South Coast Air Quality Management District board has approved outlays of nearly $52 million for the agency’s Goods Movement Program under California’s Proposition 1B statute. Prop 1B funding is provided by the California Air Resources Board.

Upwards of $26 million of the CARB money will support the deployment of several hundred natural gas-fueled trucks – 263 of them with the super-low NOx ISL G Near Zero engine from Cummins Westport. It will also support the purchase of more than 60 hybrid replacement and zero emission replacement trucks, as well as charging infrastructure and electric TRUs – transport refrigeration units.
Irvine, Calif.-based CalPortland/Catalina Pacific is to be the standout recipient, as the firm has been designated to receive $100,000 for each of 150 trucks with the 8.9-liter ISL G NZ. The engine was certified last year to the optional California Air Resources Board’s options NOx emissions standard of 0.02 grams per brake-horsepower hour — 90% lower than the current EPA heavy-duty engine standards.

Other designated double-digit recipients include

- Superior Ready Mix Concrete for 38 ISL G NZ trucks;
- Penske Truck Leasing for 30 ISL G NZ trucks;
- Anthony H. Ostercamp for 38 vehicles: ten ISL G NZ trucks, ten hybrid replacement trucks, ten hybrid replacement trucks capable of zero-emission miles, and eight zero-emission replacement trucks;
- PTI Sand & Gravel for 11 ISL G NZ trucks;
- Mountain Valley Express for ten ISL G NZ trucks; and
- Overseas Freight, Inc. for 29 zero-emission replacement trucks.

SCAQMD is also making 97 awards of $65,000 each – totaling $6.28 million – for natural gas-fueled replacement trucks powered by standard 0.20-gram-per-brake-horsepower hour engines. The lion’s share of the CARB money via SCAQMD is for trucks with the new low-NOx engine.

34. CARB Awards $23.6 Million for Port e-Trucks

Flanked by government and industry representatives, Sandy Berg, vice chair of the California Air Resources Board, awarded $23.6 million to the South Coast Air Quality Management District at ACT Expo 2016 in Long Beach.

The funding will cover a statewide demonstration project to clean up dirty trucks servicing ports and railyards along California’s busy freight corridors.

SCAQMD will oversee the project to deploy 43 zero-emission battery electric and plug-in hybrid drayage trucks serving the busiest hubs in five California air districts, she said: the San Francisco Bay Area, Sacramento, San Diego, the San Joaquin Valley and the Port of Los Angeles.

According to a project summary, battery electric trucks will be developed by BYD (which unveiled a new line of all-battery trucks at ACT Expo) and a team consisting of Peterbilt and TransPower. A team including Peterbilt and Kenworth, partnered with BAE Systems, will deploy an electric truck with a natural gas-powered range-extender.

Volvo is to deploy a plug-in hybrid electric diesel truck under its Mack brand.

35. Mexico’s Environmental Prosecutor Fines Ford

Mexico’s environmental prosecutor, Profepa, said it was fining Ford’s local unit just over 18 million pesos ($1.05 million) for selling vehicles in Mexico without the proper environmental certifications. The fine was related to the sale of 4,690 vehicles, Profepa said in a statement, adding the company was missing certificates required under norms regulating gas emissions and noise levels.
In a statement, Ford Mexico said the affected vehicles met the required emissions standards in Mexico. "The fine is due to not obtaining the emissions certificates on time," the company said, noting it was overhauling its procedures so as to avoid a repeat occurrence.

36. California Releases Draft Sustainable Freight Action Plan

California state agencies released the Draft California Sustainable Freight Action Plan, a document that lays a foundation for modernizing California’s freight transportation system to “improve freight efficiency, transition to zero-emission technologies and increase the competitiveness of California’s freight system.”

Developed in response to Governor Brown’s Executive Order B-32-15, which calls for a single integrated action plan for California, the Draft Action Plan was drafted by the California State Transportation Agency, California Environmental Protection Agency, Natural Resources Agency, California Air Resources Board, California Department of Transportation, California Energy Commission and Governor’s Office of Business and Economic Development with broad stakeholder input.

The Executive Order directs the state agencies to pursue a shared vision to “improve freight efficiency, transition to zero-emission technologies and increase the competitiveness of California’s freight system.” Benefits include meeting the state’s freight infrastructure, public health, and air quality and climate goals.

The Draft Action Plan responds to the Governor’s Executive Order by articulating one shared vision to improve the efficiency of California’s freight system while reducing its pollution, all the while bolstering the competitiveness of California’s goods movement system nationally and internationally.

Key components of the Action Plan include:
- A long-term 2050 vision and guiding principles for California’s future freight transport system.
- Targets for 2030 to guide the State toward meeting its long-term vision:
  - Improve freight system efficiency 25 percent by 2030.
  - Deploy over 100,000 zero-emission vehicles/equipment and maximize near-zero by 2020.
  - Foster future economic growth within the freight and goods movement industry.
  - Identified opportunities to leverage State freight transport system investments.
  - Actions to initiate over the next five years to make progress towards the Draft Action Plan’s vision and target.
  - Pilot projects to achieve concrete progress in the near-term.
  - Additional concepts for further exploration and potential development.

Achieving the Draft Action Plan’s objectives will require strategic partnerships and well-coordinated investments in new technologies and major infrastructure upgrades. The plan provides an opportunity for leveraging new federal, State, local and private investment for these freight transport system improvements.

California’s freight system is the most extensive and interconnected freight system in the United States and is composed of several deep water seaports, cargo airports, border crossings, and a vast warehousing and distribution sector, all connected by a network of over 11,000 miles of railroad track and Interstate and state highways. Each component is critical and the system
depends on these interconnected facilities working in concert to move freight in and out of California to the rest of the nation and across the globe. California’s freight-dependent industries accounted for more than $740 billion in revenue and more than 5 million jobs in 2014.

While freight transport in California is a major economic engine for the state, emissions from ships, harbor craft, trucks, locomotives, cargo equipment, aircraft and other freight participants account for about half of toxic diesel particulate matter (PM 2.5), 45 percent of the emissions of nitrogen oxides (NOx) that form ozone and fine particulate matter in the atmosphere, and 6 percent of all greenhouse gas emissions in California. Many of these pollutants are emitted in close proximity to communities and pose health risks to nearby residents, highlighting the need for additional steps to protect public health.


The Draft Action Plan is available for stakeholder and public feedback through July 6, 2016.

37. Colorado Simplifies Electric-Car Incentive, But Eliminates Used Models

The Colorado State Legislature recently passed a bill that would simplify the state’s electric car incentives. However, it would remove the eligibility of used cars that could qualify for the same credit.

The measure, House Bill 16-1332, would make the state's electric and alternative vehicle credits considerably simpler, by giving the tax credit some of the characteristics of a purchase rebate. The changes would let dealers offer an incentive "on the hoods" of new cars, rather than requiring buyers to wait until they file for the credit as part of that year's tax return.

Colorado currently has one of the country's most generous tax credits: up to $6,000, depending on battery size. Unlike tax credits in other locations, Colorado will actually refund money if the credit exceeds the tax owed. The Federal credit, for example, can only be used to reduce taxes to zero.

The new bill would cap the credit at $5,000, simplifying the math. But it would also let new-car buyers transfer their tax credit to a dealership or financing agency—effectively making it an instant discount on the purchase price.

Under the new rule, dealers would be allowed to charge up to $150 to transfer the credit.

The new legislation ends the state's incentives on used electric cars, which buyers qualified for if buying a used car that hadn't previously been registered in the state. "It's totally going to hose me," said Luke Walch, owner at Green Eyed Motors in Boulder, which specialized in used electric car sales. Walch brought in many electric cars from other states—including many not originally available for sale in Colorado—that qualified for the tax credit and would otherwise qualify for the new rebate. "If their ultimate goal is to get more electric cars on the road, it doesn't make sense," said Walch.

The bill had wide support from dealership groups and manufacturers, including bipartisan support in the Legislature. It awaits Colorado Governor John Hickenlooper's signature.
38. Canada Considers Tougher Nitrogen Dioxide Standard

Canada is considering developing a more stringent national air quality standard for ambient nitrogen dioxide to address the health risks of diesel exhaust and oil and gas production. A human health risk assessment of nitrogen dioxide found strong evidence that exposure to the gas can lead to adverse health effects at concentrations common in Canada, Health Canada said in a summary of the assessment published in the May 14 issue of the Canada Gazette, Part I.

The risk assessment was commissioned to determine the need for development of a new National Ambient Air Quality Objective for nitrogen dioxide, Health Canada said. The current “acceptable” national objective is 400 micrograms per cubic meter on an hourly basis, with a “tolerable” level of 1,000 micrograms per cubic meter, a 24-hour “acceptable” average of 200 micrograms per cubic meter and “tolerable” average of micrograms per cubic meter and an annual “desirable” average of 60 micrograms per cubic meter and “acceptable” average of 100 micrograms per cubic meter.

The U.S. Environmental Protection Agency’s National Ambient Air Quality Standard for Nitrogen Dioxide is 100 parts per billion on an hourly basis (equivalent to 188 micrograms per cubic meter) and an annual mean exposure of 53 parts per billion (99.6 micrograms per cubic meter).

“The health evidence supports the establishment of short-term and long-term standards to protect against the full suite of health effects associated with ambient NO2,” Health Canada said.

Health Canada’s assessment cites short-term adverse health effects from ambient nitrogen dioxide as including decreased lung function; airway inflammation; and asthma-related respiratory symptoms, particularly in young children and the elderly. It also contributes to the risk of death when combined with the impact of other pollutants, it said.

The notice did not indicate how a more stringent standard would be enforced, but it would likely primarily affect the vehicle manufacturing and oil and gas production sectors.

39. U.S., Mexico, Canada Agree to Energy, Environment Partnership

The U.S., Canada and Mexico have agreed to ensure that 50 percent of North America’s energy comes from “clean” sources by 2025 through increased wind, solar, nuclear and other renewable energy production.

Environment-related issues dominated the agenda for the June 29th meeting in Ottawa of President Barack Obama, Canadian Prime Minister Justin Trudeau and Mexican President Enrique Pena Nieto, including the announcement of a new North American Climate, Clean Energy and Environment Partnership Action Plan.

In addition to the clean energy target, the plan calls for Mexico to join the U.S. and Canada in reducing methane emissions from the oil and gas sector by 40 percent to 45 percent by 2025, as well as aligning vehicle fuel efficiency standards, appliance and equipment energy efficiency standards and “green” freight programs.

The agreements reached will concentrate the three countries’ focus on improving North American economic competitiveness while encouraging clean growth and protecting the environment for generations to come, Trudeau said at a news conference at the summit’s conclusion. “Today, we
turned that resolve into action,” he said. The “ambitious” continental clean energy plan demonstrates strong global leadership and confirms that clean energy and clean growth are the solution to climate change, he said.

Specific measures highlighted in the joint statement include:

- developing and implementing as soon as possible federal regulations for existing and new sources of methane emissions from the oil and gas sector and drawing up national strategies to address emissions from other sectors, including agriculture and waste management;
- initiating actions to reduce black carbon, including aligning 2018 ultra-low sulfur diesel fuel standards among the three countries to reduce emissions from heavy-duty diesel vehicles to near-zero levels;
- aligning by 2018 fuel efficiency standards for light- and heavy-duty vehicles for model years through 2025 and 2027, respectively;
- aligning by 2018 light-duty vehicle exhaust and evaporative air pollutant emission standards with full U.S. Environmental Protection Agency Tier 2 standards and, by 2025, full phase-in of EPA Tier 3 standards;
- aligning and harmonizing “green” freight efforts by expanding the SmartWay Program to include Mexico;
- committing the U.S. General Services Administration and Public Services and Procurement Canada to source 100 percent of electricity purchases from clean energy sources by 2025;
- aligning six energy efficiency standards or test procedures for equipment by Dec. 31, 2017, and 10 standards or test procedures by Dec. 31, 2019; and
- adopting by 2017 the voluntary ISO 50001 energy performance standard.

The national leaders also recommitted to jointly meet the Paris Agreement goal of limiting global warming to well below 2 degrees Celsius and to jointly seek amending the Montreal Protocol to phase down the use of hydrofluorocarbons.

They also reconfirmed commitments to work through the International Maritime Organization to reduce greenhouse gas emissions from international shipping, including from existing ships, and efforts through the International Civil Aviation Organization to reduce emissions from air transport, including through adoption at the 2016 ICAO Assembly of a market-based measure.

40. VW Agrees To Buy Back Diesel Vehicles, Fund Clean Air Efforts

German automaker Volkswagen AG will pay as much as $15.3 billion after admitting it cheated on U.S. diesel emissions tests for years, agreeing to buy back vehicles from consumers and provide funding that could benefit makers of cleaner technologies.

The largest-ever automotive buyback offer in the United States came in a deal announced by the Justice Department, Federal Trade Commission, Environmental Protection Agency and California state regulators. The proposed consent decree confirmed that VW will set aside $10.033 billion to cover buybacks or fixes for diesel cars and sport utility vehicles that used illegal software to defeat government emissions tests.

VW still may face criminal charges and oversight by an independent monitor, according to reports. A criminal settlement could include measures to ensure VW would not engage in further cheating.
Shares of VW rose as much as 5 percent on the news.

Under the Justice Department deal, VW will provide $2 billion over 10 years to fund programs directed by California and EPA to promote construction of electric vehicle charging infrastructure, development of zero-emission ride-sharing fleets and other efforts to boost sales of cars that do not burn petroleum.

VW also agreed to put up $2.7 billion over three years to enable government and tribal agencies to replace old buses or to fund infrastructure to reduce diesel emissions.

The settlement covers 475,000 2.0-liter diesel Jetta, Beetle, Audi A3, Golf, and Passat vehicles from the 2009-2015 model years.

VW also announced a separate settlement with 44 U.S. states, the District of Columbia and Puerto Rico that will cost at least $600 million, bringing the total to as much as $15.3 billion.

Deputy U.S. Attorney General Sally Yates said a criminal investigation remained active. "We're looking at multiple companies and multiple individuals," she said. "By duping regulators, Volkswagen turned nearly half a million American drivers into unwitting accomplices in an unprecedented assault on our environment," she added.

The EPA is investigating other automakers for potential emissions problems. EPA Administrator Gina McCarthy said the agency "will be releasing information as it becomes available."

VW still faces criminal investigations in Germany and other countries, and lawsuits from investors around the world.

The company planned a multi-billion-euro investment program to introduce more than 30 fully electric cars by 2025.

Owners have until late 2018 to decide whether to sell the vehicles back.

The deals would move VW close to the 16.2 billion euros ($18 billion) it has set aside to cover costs of the scandal.

But spending on buybacks could be much less if regulators approve fixes and owners opt for repairs. Most owners will get $5,100 to $10,000 in compensation, including the pre-scandal value of the cars, documents filed said. The company expects to begin buying back vehicles in October, when a U.S. judge is expected to give final approval to the settlements, and is to start proposing fixes in November.

VW cannot resell or export vehicles it buys back unless the EPA approves a fix, the documents said. Volkswagen must repair or buy back 85 percent of the 475,000 vehicles by June 2019 or face penalties of $100 million for every percentage point below that figure.

The agreement does not lift a ban on sales by VW of its U.S. 2016 diesel vehicles. Nor does it cover fees for lawyers of owners suing the company or address 80,000 larger polluting 3.0 liter Porsche, Audi and VW diesel cars. VW could also face billions in additional costs if it is forced to buy back the 3.0 liter vehicles.
VW will likely face significant yet-to-be determined fines under the U.S. Clean Air Act for emissions violations.

The settlement does not resolve lawsuits filed last year by owners against German auto supplier Robert Bosch GmbH, which was accused of conspiring with Volkswagen to evade emissions standards.

**41. Volkswagen Lawyer Says 3.0L Diesel Cars Will Likely Be Fixed, Not Bought Back**

A lawyer for Volkswagen Group told a US district judge that the company will probably be able to fix the 85,000 outstanding 3.0L diesel Porches, Audis, and Volkswagens that were also discovered to flout emissions regulations, following revelations that nearly 500,000 2.0L diesel vehicles were built with illegal emissions cheating software.

The 3.0L diesels were not included in the settlement that Volkswagen would spend $10 billion to buy back diesel cars that were spewing up to 40 times the legal limit of nitrogen oxide (NOx). The 3.0L cars were discovered two months after the first revelations of cheating and have since been on a separate track. VW Group contests that its 3.0L cars did not cheat on federal emissions tests in the same way that the 2.0L engines did, although the Environmental Protection Agency (EPA) has asserted that the cars in question were built with illegal auxiliary devices to circumvent emissions regulations.

Reuters reports that US District Judge Charles Breyer asked that VW Group provide an update on this fix on August 25, but the judge has not yet given VW Group a firm deadline to present a fix to US regulators. VW Group’s lawyer told the judge that the fix the company is currently working on would not be complicated or impact the cars’ performance greatly.

The diesel versions of Volkswagen Touaregs, Porsche Cayennes, and Audi A6s, A7 Quattros, A8s, Q5s, and Q7s are the cars implicated in VW Group’s second, smaller scandal. If Volkswagen can find a fix for these 85,000 cars on US roads that satisfies the EPA and California’s Air Resources Board (CARB), that could potentially save billions in buybacks.

**42. California Court Decision on Diesel Rule Hits Small Fleets and Farmers Hard**

A decision by the Superior Court of California in Fresno agreed with the California Trucking Association’s request to erase a range of amendments to the state’s major rule to clean up diesel trucks and buses. The case is not against the rule itself, which remains fully in effect, but the amendments adopted in 2014. The amendments provide badly needed flexibility to smaller fleets (three trucks or less), lower-use vehicles including those operated by small farmers, and fleets in some rural areas. ARB will immediately file an appeal, which will maintain the status quo while the case makes its way through the higher courts.

“California led the way by adopting our landmark regulation to clean up dirty trucks, and our air quality has benefited immensely,” said CARB Executive Officer Richard Corey. “In 2014, we recognized the extreme economic pressures experienced by smaller trucking fleets and independent owners as they sought to comply by upgrading or purchasing new equipment. We responded by amending the regulation to make it more flexible for ‘the little guys’ to comply. This court decision negates those amendments and deals a profound blow to the smaller fleets, small farmers and independent owners.”
The lawsuit, filed by John R. Lawson Rack and Oil of Fresno, and the California Trucking Association (CTA) alleges ARB did not follow the proper procedures of the Administrative Procedures Act and the California Environmental Quality Act in adopting the amendments. CTA also alleges their members’ economic interests were harmed by them being undercut competitively by fleets who took advantage of the flexibility provisions.

“We strongly disagree with the court, and will file an appeal in all possible haste,” said Jack Kitowski, CARB head of the Mobile Source Division which oversaw the development, and is in charge of putting the regulation into effect on a daily basis. “We don’t want to see small fleets and farmers hurt by this decision,” he added.

As the case makes its way through the Court of Appeal process, ARB staff statewide will continue to enforce the regulation and will cite those vehicles found to be out of compliance.

Diesel exhaust contains a variety of harmful gases and more than 40 other known cancer-causing compounds. In 1998, California identified diesel particulate matter as a toxic air contaminant based on its potential to cause cancer, premature death and other health problems.

43. California Regulators Voice Support for Cap and Trade Program

Staff for California's air regulator have recommended the state extend its carbon cap and trade system beyond 2020, a move supported by utilities and some environmental groups but opposed by environmental activists representing low income communities. The show of support comes after the state failed to sell any permits covering 2016 emissions at a recent state-run auction and market participants await the outcome of a lawsuit challenging the program.

Market regulators maintained that selling the permits, the proceeds of which fund low carbon programs like the state's bullet train, is not the primary point of the program - cutting carbon emissions is. "The fact that there were allowances that were offered at auction but weren't sold doesn't say anything about the overall success of the program," said Mary Nichols, chair of the California Air Resources Board (ARB), suggesting industries were keeping a lid on carbon emissions rather than buying permits to emit more.

ARB staff said the state is on track to meet its 2020 emissions reduction target of returning to 1990 levels and signaled its support for an extension of the carbon pricing program out to 2030, when cuts will have to be much deeper.

Legislation that would pave the way for the program to continue into the future has yet to come up to a vote and the exact level of support by lawmakers is unclear. The legislature also has yet to appropriate about $3 billion in cap and trade revenues.

Katie Valenzuela Garcia, an activist who sits on the board's Environmental Justice Advisory Committee, said the program should not continue without significant changes. "I'm concerned by preliminary data from the adaptive management tool that show that the gross numbers for cap and trade facilities are going up," she said, arguing that industries are buying carbon permits so they can maintain or increase emissions from plants.

She and others on the committee worry that carbon markets give companies the flexibility to keep their most polluting refineries and factories open and said those facilities are often located in low income communities of color.
An ARB staff member said Washington State intends to allow businesses there to use California permits to meet that state’s emission reduction goal, a move that could boost demand for California carbon permits. The fact that Washington wants to include California permits in its program is a testament to the state’s leadership on environmental issues, Nichols said.

California will release a draft of its plan to cut emissions 40 percent below 1990 levels by 2030 later this summer. The plan is expected to include cap and trade.

44. Truck Industry Fights Tighter Mexican Emissions as Smog Worsens

Daimler AG and other truck makers are fighting to delay new emission standards in Mexico as the government struggles to control the worst smog in the capital city in 14 years. Mexico published draft rules in December 2014 to slash emissions on all new trucks and buses. Since then the regulations have stalled as companies including Daimler, which is Mexico’s largest builder of heavy-duty vehicles, call for less stringent controls, saying the tighter standards could make new trucks too expensive for consumers.

Truck manufacturers say Mexico should focus on renewing the country’s aging fleet of vehicles to clean up the smog and are calling on the government to provide subsidies, as well as slowing the expensive new emission standards. The government, which is cutting spending after a slump in oil prices, wants industry to bear the cost.

While the two sides argue, the 20 million residents of Greater Mexico City typically wake to a blanket of smog so thick it cloaks volcanoes as high as 18,000 feet that ring the capital. The authorities estimate that smog kills 2,700 people each year in the city. As pollution worsens, that estimate could rise, according to Mexico’s Environmental Rights Center, known as Cemda. Ozone levels climbed to their highest this spring since 2002, forcing authorities to impose emergency restrictions.

Daimler said the retooling needed to comply with the new regulations would raise truck prices as much as 20 percent, making them so expensive it would deter the purchase of new vehicles. That could lead companies to keep older polluting trucks on the road in a country where the average age of heavy-duty vehicles is 17 years.

While Mexico is proposing to raise standards to Euro VI from the current Euro IV, the nation’s truck and bus chamber Anpact is seeking simultaneous implementation for at least four years of both Euro V and Euro VI, the first being a standard that Europe no longer uses. This will prevent a collapse in sales, said Anpact, which also seeks tax breaks and incentives equal to about 20 percent of the price of a vehicle.

Publication of the new standards has been tied up in part by the industry’s insistence on a four-year transition from 2018, said Rafael Coello, an official with the nation’s environmental protection agency.

Anpact’s “proposal is a big threat for public health,” said Axel Friedrich, a former German environmental regulator and co-founder of ICCT, the group that raised concerns about Volkswagen emissions testing results. “If you have two standards, operators will buy the cheaper vehicle. Is the life of a Mexican worth less than the life of a European?”

While Euro VI standards requires a diesel particulate filter to be fitted to trucks, Euro V doesn’t.
In Mexico, the government gave initial approval to the Euro VI standards in a draft proposal published in the official gazette in 2014, but has yet to publish the final rules a year and a half later.

In Europe, Daimler praised the Euro VI standard that came into operation in 2014, saying in one statement they would reduce nitrous oxide and particulate emissions by more than 90 percent, and that the company's early adoption of the rule turned an obstacle into an “opportunity.”

What is more, truck and bus makers in Mexico make vehicles that meet the new standards for shipment to the U.S., said Cemda spokeswoman Margarita Campuzano. Mexico's government is at fault for letting pressure from the automobile industry, whose $26 billion in new investment since the beginning of 2010 has been a motor of economic growth, delay the new standards, she said.

45. Supreme Court Rejects Challenge to Obama Mercury Air Pollution Rule

The U.S. Supreme Court turned aside the latest effort by a group of states led by Michigan to block Obama administration environmental regulations limiting power plant emissions of mercury and other toxic pollutants. The justices opted not to hear the states' appeal of a December U.S. appeals court decision allowing the mercury rules to remain intact while the administration responded to last year's Supreme Court ruling that the government should have considered the compliance costs when crafting the regulations.

Opponents of the regulations, which went into effect in April 2015 and affect mainly coal-fired power plants, have estimated they would cost $9.6 billion a year and raise electricity bills.

This action marked the second time this year the Supreme Court has spurned the states on the issue. Chief Justice John Roberts on March 3rd declined their request for a stay to put the regulations on hold.

The Environmental Protection Agency has "blatantly refused" to follow the 2015 high court ruling, prompting the states to ask the Supreme Court to intervene again, said Andrea Bitely, a spokeswoman for Michigan Attorney General Bill Schuette, a Republican.

An EPA spokesman said the regulations "cut harmful pollution from power plants, saving thousands of lives each year and preventing heart and asthma attacks."

Environmental groups that support the regulations backed the Supreme Court's refusal to hear the case. "The Supreme Court correctly rejected the latest industry challenge to these vital protections against dangerous, toxic pollutants," said Sanjay Narayan, a lawyer with the Sierra Club.

The EPA has updated the regulations since last year's ruling by the high court, finding in April that they were necessary even when costs that would be incurred by industry are taken into account. The EPA's April decision is itself challengeable in court. Coal company Murray Energy Corp has already filed a lawsuit.

The Supreme Court in June 2015 ruled that the Obama administration wrongly failed to consider compliance costs when it devised the regulations, which were intended to reduce deaths caused by air pollution and reduce cases of mercury poisoning that can cause developmental delays and abnormalities in children.
According to the EPA, the rule applies to about 1,400 electricity-generating units at 600 power plants.

The mercury rules are separate from Obama administration regulations intended to curb carbon dioxide emissions that the Supreme Court put on hold on Feb. 9 in a legal challenge brought by 27 states and others.

46. U.S. Navy 'Green Fleet' Fills Up with Italian-Made Biofuel

A U.S. warship took its first delivery of Italian-made biofuel as part of the Navy's program to use more alternative energy. The USS Mason was refueled alongside an Italian vessel, the Andrea Doria, in the seas off of Italy's southern coast with a mix produced by Italy's Eni that has 5.5 percent palm oil biofuel blended into marine fuel.

The two destroyers traveled at about 5 knots side by side with a supply ship, the Etna, between them pumping the fuel to both ships through large black tubes.

"It's a first today," U.S. Navy Secretary Ray Mabus told reporters aboard the Mason. "But it's the new normal. It's what you're going to see - refueling after refueling after refueling."

Mabus has championed the "Great Green Fleet" initiative since 2009, saying it will give a strategic advantage to the United States by reducing dependence on fluctuating oil prices and producers who may not have America's best interest in mind.

"Fuel can be used as a weapon," Mabus said. "All you have to do is look at what Russia did to Crimea, what Russia did to the Ukraine. Look at what Russia tried to do to Europe before the price of oil went down."

The cost of the fuel was $2.20 per gallon, which Mabus said was "very competitive" for Europe.

Many environmentalists say palm oil production damages the environment as it is often grown in plantations where rainforest has been cleared. Biofuels can also be made from other biomass or from by-products such as waste cooking oils.

The U.S. Navy now has 30 percent of its fleet, the world's biggest, running on alternative energy - which includes nuclear power - and aims to increase that to 50 percent by 2020, Mabus said.

Italy aims to have 50 percent of its fleet using alternative energy by 2020, Italy's Admiral Giuseppe De Giorgi, also aboard the USS Mason, told reporters. About 10 percent of vessels are already running on alternative energy and Italy's submarines should start using biofuel this year, he said.

Italy had eight vessels present during the refueling, including a submarine, and several ships from the U.S. Sixth Fleet were also there, including the nuclear-powered USS Dwight D. Eisenhower aircraft carrier.

ASIA-PACIFIC

47. Beijing to Adopt China’s Toughest Fuel Quality Standards
In an effort to help clear the air in the polluted capital, Beijing will institute China's toughest fuel quality standards beginning Jan. 1, 2017, the government announced on May 23rd. The Beijing VI standards for gasoline and diesel fuel could help cut vehicle emissions in the city by 15 percent to 20 percent compared to current levels, according to the Beijing Municipal Environmental Protection Bureau.

The standards set sulfur content at 10 parts per million, though most of the improvements to quality come from the reduction of benzene and polycyclic aromatic hydrocarbons and through processes such as distillation and density specifications.

Nationally, China V gasoline and diesel fuel quality standards—comparable to standards the European Union adopted in 2009, which have since been superseded in the European Union—also will begin rolling out at the start of 2017.

The Ministry of Environmental Protection also released a draft for China VI light-vehicle emissions limits and measurement methodology May 12, with a public comment period running to June 13 as it begins preparing for more tightening of standards following implementation of China V fuel and emissions standards next year.

Beijing vehicle fuel and emissions standards also are expected to be extended to neighboring Hebei province and Tianjin municipality in the next few years as the region around Beijing—which has chronically bad air quality—integrates environmental policies and standards, according to a May 20 report from China Environment News, a news agency affiliated with the ministry.

48. China Restructures Its Environmental Agencies from the Bottom Up

Li Zhiqing is the deputy director of the Research Center on Environmental Economics at Fudan University and he recently published a report on China’s environmental management. Excerpts are below.

The Chinese central government has vowed to take stronger steps in ensuring its policy of environmental protection is carried out. During the Fifth Plenary Session of the 18th Communist Party of China (CPC) Central Committee in October 2015, top priority was given to domestic green development projects. For the first time, the CPC has pledged to update the current system of governance among the many levels of environmental protection authorities, and will attempt to install a new vertical management system to be put into effect under China’s 13th Five-Year Plan, from 2016 to 2020.

Vertical management is a system whereby an agency works via an internal hierarchical structure, with lower departments reporting directly to upper ones instead of to outside local governments.

The purpose of instigating this vertical management reform in environmental agencies is to fix the problems raised by administrative inefficiency in the bureaucratic system. Currently, the different departments of local governments shoulder the responsibility of carrying out environmental protection, and each department of the environmental agencies reports individually to the government. It is the local government offices that appoint the heads of the agencies and provide financial support. This is known as the “parallel management system.”

Parallel management is the system through which environmental reform has been carried out over the past 35 years in China, and a complete overhaul will be a huge endeavor. Vertical
management will also serve to give provincial governments more power, since they will work directly with the leaders of the environmental agencies instead of relying on local governments.

In 1978, when Deng Xiaoping first launched his economic reforms, China was badly in need of economic growth. The central government delegated the responsibilities of environmental protection to local government, while also placing pressure to increase local economic performance. In fact, much more importance was placed on the economic performance evaluations than on environmental protection. This assessment system causes problem since it is much more economically viable to rely on polluted industries than on environmentally friendly ones.

Although ultimately ineffective, the reasoning behind the parallel management was sound. Under the tax division system, each locality would pay tax to the central government. Part of this tax was returned to local governments to finance the execution of policies. From there, money set aside for environmental reform was then distributed to the separate agencies. There was a lot of bureaucracy to go through since each agency would individually have to report to its parallel local government branch when applying for funds. One of the intentions of vertical management is to make the funneling of capital more direct.

Under the parallel management system, the environmental agencies are normally only offered financial support by local governments if the agencies can prove that their projects will increase economic growth. They can almost never compete economically with the industries that cause pollution, and this emphasis on economics over environment has been one of the main instigators of China's pollution problems over the last 30 years.

Now that China has firmly established itself economically, it is time to take action with environmental reform. Several provinces are eager to adopt this new system because they believe that a focus on environment will help set them ahead of other provinces. The implementation of this system comes at a time when the Chinese public is becoming increasingly aware of the importance of environmental reform. One of the main reasons to pursue vertical management is that it will help improve policy efficiency.

49. China Says Half of New State Cars to Be New Energy by 2021: Xinhua

China said on Thursday more than half of new vehicles bought by central government departments will be new energy cars within five years, the official Xinhua news agency reported.

The National Government Offices Administration (NGOA) said central state departments will encourage environmentally friendly modes of transport and will build charging stations. At a meeting on energy and resource saving, the NGOA launched a self-service new energy vehicle rent program.

China is promoting new energy vehicles as one of its key industries in the country's 13th Five-Year Plan which starts this year. Under the plan, the aggregate production and sales volume will hit 5 million in five years.

50. China to Tighten Environmental Rules in Industrial Parks

China's Ministry of Environmental Protection intends to enforce better environmental oversight and protection inside the thousands of industrial parks countrywide within five years, according to a statement from the ministry. Industrial parks have long been sites of lax environmental
regulation in China due to their status within local communities as prime economic drivers and status symbols. In addition, jurisdictional controls over parks have been tied directly to top local development bodies.

In its May 27 notice, the ministry calls for public comment through June 6 on plans to strengthen environmental oversight.

The ministry's plan calls for full implementation of environmental impact assessment regulations for planning future industrial parks, meaning if no impact assessment is completed, or if it is not done properly, the industrial park should not be approved. In addition, the ministry is calling for follow-up impact assessments to be conducted every five years on existing industrial parks.

Significant issues at industrial parks in China include a lack of wastewater treatment facilities, air pollution and noise pollution.

All paper-making, chemical producers, printing, electronic polishing and heavy metals production enterprises will be required to move operations into industrial parks, in accordance with provincial and local governments orders.

Industrial sites related to chemical production, storage or sales, coal mining operations and landfills will be required to initiate measures to keep pollutants from getting into groundwater resources. Parks that have had problems containing these pollutants that have directly threatened drinking water resources could be closed.

Specific areas will be required to implement the policies first: the Beijing-Tianjin-Hebei region, the Yangtze River Delta region around Shanghai, and the Pearl River Delta region in South China.

51. Some Hebei Steelmakers Breaching Shutdown Orders: China Ministry

Steelmakers in China’s Hebei province have built new plants in contravention of state measures aimed at tackling overcapacity, and have kept mills running that should have been shut down, China's pollution watchdog has announced. The Ministry of Environmental Protection (MEP) said Hebei, home to much of China's heavy industry, had made some progress in curbing smog and improving water quality, but it was still not putting enough pressure on local governments to meet environmental standards and shut down polluting industries.

In a notice posted on its website, the ministry singled out firms in the major steelmaking city of Tangshan for illegally expanding ferroalloy production capacity. It said "fraudulent practices" continued to take place, while new power plants were also being approved in the province despite Hebei's plans to cut coal consumption.

China has been pushing to cut overcapacity in its steel industry, but a jump in steel prices has encouraged many producers to ramp up production, potentially exacerbating a global steel glut that has sparked trade friction.

Hebei produces around a quarter of China's steel, and according to official rankings is home to seven of the country's 10 smoggiest cities. Although the province has been on the frontline of China's "war on pollution", the environment in some of its regions had continued to deteriorate, the ministry said.
From 2013 to 2015, the province shut down 200 illegal enterprises and detained 123 people for breaching environmental laws, the ministry said.

The province pledged to shed 60 million tons of outdated steel capacity over the 2013-2017 period, and also aims to slash coal consumption by 40 million tons a year over the four years as part of its efforts to improve air quality. Hebei's total crude steel capacity stood at 286 million tons in 2014 and it aims to bring that down to 200 million tons by 2020. It produced 188.3 million tons last year, up 1.3 percent from 2014 and amounting to 23.4 percent of the national total.

52. Iranian, Indian Cities Ranked Worst For Air Pollution

India has four of the 10 cities in the world with the worst air pollution, the World Health Organization said recently. But while WHO experts acknowledge India faces a "huge challenge", many countries are so bad that they have no monitoring system and cannot be included in its ranking.

The dirtiest air was recorded at Zabol in Iran, which suffers from months of dust storms in the summer, and which clocked a so-called PM2.5 measure of 217. The next pair were Indian, Gwalior, Allahabad, followed by Riyadh and Al Jubail in Saudi Arabia, then two more Indian cities, Patna and Raipur.

India's capital New Delhi was the survey's 11th worst city, measured by the amount of particulate matter under 2.5 micrograms found in every cubic meter of air. Delhi had an annual average PM2.5 measurement of 122.

Tiny particulate matter can cause lung cancer, strokes and heart disease over the long term, as well as trigger symptoms such as heart attacks that kill more rapidly. The WHO says more than 7 million premature deaths occur every year due to air pollution, 3 million of them due to outdoor air quality.

New Delhi was ranked worst in 2014 with a PM2.5 reading of 153. It has since tried to tackle its toxic air by limiting the use of private cars on the road for short periods. Maria Neira, head of public health, environmental and social determinants of health at the WHO, praised India's government for developing a national plan to deal with the problem when others have been unable to.

"Probably some of the worst cities that are the most polluted ones in the world are not included in our list, just because they are so bad that they do not even have a good system of monitoring of air quality, so it's unfair to compare or give a rank," she said.

Common causes of air pollution include too many cars, especially diesel-fueled vehicles, the heating and cooling of big buildings, waste management, agriculture and the use of coal or diesel generators for power.

On average, pollution levels worsened by 8 percent between 2008 and 2013, although most cities in rich countries improved the state of their air over the same period.

The WHO data, a survey of 3,000 urban areas, shows only 2 percent of cities in poorer countries have air quality that meets WHO standards, while 44 percent of richer cities do.
The WHO database has almost doubled in size since 2014, and the trend towards more transparency translated into more action to deal with the problem, Neira said. However, there was still very sparse data on Africa, she added.

53. India Court Bans Large Diesel Vehicles in Southern State

On May 23rd, India's National Green Tribunal banned registration of new large diesel-powered passenger vehicles in Kerala, in southern India, due to air pollution concerns. In an order, the tribunal also ruled that no diesel vehicle older than 10 years old would be allowed in the major cities of Kerala.

It marked the second time in recent years that an Indian court has instituted such a ban on diesel vehicles with engine capacity of 2,000 cubic centimeters and above. In December 2015, the Supreme Court of India imposed a similar ban on some diesel vehicles in the National Capital Region of Delhi. The Delhi ban has cost 5,000 jobs in the automobile industry, a spokesperson from the industry association Society of Indian Automobile Manufacturers told reporters.

The National Green Tribunal said that there was no plan to extend the ban on diesel vehicles prevailing in the Capital and Kerala to other cities across the country.

The clarification came from the green panel, which said that as of now it was not planning to extend such a ban and it would first examine the data received from different States on pollution levels in various cities.

The Tribunal also directed all the concerned secretaries of all States to submit an affidavit within three weeks stating two most polluted cities within their territory, total population and vehicle density in each district.

“We are not banning any vehicles. We have asked State governments to submit a report on the pollution levels in various cities. Let that data come and then we will hear different parties and decide accordingly,” a bench headed by NGT Chairperson Justice Swatanter Kumar said.

The observation came after Additional Solicitor General Pinky Anand, appearing for Ministry of Heavy Industries, asked the bench not to extend to other cities the ban on registration of vehicles beyond 2000 cc. The ASG said that about eight per cent FDI under “Make in India” has come from the automobile industry and the sector generates employment opportunities and any restriction on it would have an adverse effect on the momentum of its growth.

Senior advocate A.M. Singhvi, appearing for Society of Indian Automobile Manufactures, opposed the idea of extending diesel ban to other metros and said diesel was not the only source of pollution. “Sources of pollution are other than diesel vehicles as well. Other sources like dust and burning also contribute to the air pollution,” Singhvi said.

To this the bench said, “In any case we have already said that there are primarily three sources of pollution, burning of waste and other materials, dust emission from other sources and vehicular pollution. “That is why we want every State to react. We want every State to give response on each aspect. Let that data come to us and then we will hear the matter in detail,” the bench said.

The Tribunal had earlier taken State governments to task for not taking a clear stand on pollution and vehicle density in major cities in their jurisdiction and directed them to produce the information failing which bailable warrants will be issued against chief secretaries. The green panel had
directed Maharashtra, UP, Bihar, Tamil Nadu, Andhra Pradesh, Punjab, West Bengal and
Karnataka to apprise it about cities which have worst ambient air quality, total number of vehicles
along with their bifurcation (diesel/petrol) and the total population in each city.

The Tribunal had also rapped Central Pollution Control Board for submitting “half-baked” data on
the population and vehicle density in major cities across the country. The CPCB report had
indicated that ambient air quality in most of the cities was beyond permissible standards.

Noting that the air quality in metropolises was in violation to the prescribed standards, the Tribunal
had directed the apex pollution monitoring body to file comprehensive data on the population and
vehicle density in major cities across the country. It had taken note of air pollution in Mumbai,
Kolkata, Bangalore, Patna, Lucknow, Allahabad, Kanpur, Varanasi, Nagpur, Chennai,
Hyderabad, Ludhiana, Jalandhar, Amritsar and Pune and directed States to file a comprehensive
affidavit stating the steps taken by them for prevention and control of air pollution.

The Tribunal, which was restrained by the Supreme Court from dealing with matters on air
pollution in Delhi, had earlier expanded the ambit of hearing by seeking responses on worsening
air quality in metropolises like Mumbai, Kolkata and Chennai.

On December 18 last year, the Tribunal had refused to vacate its order banning registration of
new diesel-run vehicles, saying it won’t interfere with the Supreme Court order, which has taken
a similar stand.

In contrast to the prior NGT order banning registration of all diesel vehicles, the Supreme Court
on December 16 exempted small ones and specified that the diesel-run SUVs and cars having
engine capacity beyond 2000 cc would not be registered in Delhi and the National Capital Region.

54. Some Good News, Some Bad for 15 Major Indian Cities on Air Quality Front

A Central Pollution Control Board (CPCB) report on air quality in 15 cities shows that most cities
are breaching the national annual safe standard.

While some are seeing a rising trend and some are also showing a decreasing trend in PM 10
(coarse pollution particles) levels, the study also shows that most cities saw an improvement in
2015 compared to previous years. The CPCB concludes in its report that improvement could be
linked to implementation of stricter vehicle norms and better fuel quality.

The report was compiled by the CPCB after the NGT in its February 9 order directed it to file an
"analysis report" on pollution levels in all major cities identified by the tribunal. The report is also
one of the documents on the basis of which the NGT is spearheading the efforts to reduce
pollution in other major cities while an air pollution case pertaining to the Capital is being heard in
the Supreme Court.

The NGT asked for more air pollution data from states with details of major sources so that it can
come up with effective solutions. The report, which compiles pollution levels from manual
monitoring stations in 15 cities, shows that PM 10 levels seem to be falling in Mumbai, Pune,
Ludhiana, Amritsar, Chennai while in Lucknow they are stabilizing.
There are no clear trends in Bengaluru, Jalandhar, Allahabad, Kanpur and Kolkata, but PM levels are seen increasing in Hyderabad and Varanasi. "The reason for decrease in PM 10 levels may be implementation of stricter vehicle norms (BS IV)," the study claims. "The fluctuating trends in some cities could be because of vehicles, diesel gen sets, small scale industries, biomass incineration, resuspension of traffic dust and others," it said. Sulfur dioxide (SO2) levels were found to be meeting safe standards in nearly all cities. Most cities also met the nitrogen dioxide (NO2) standards except Patna, Pune, Amritsar and Kolkata in some years.

Experts, however, said the report is inadequate as it doesn't correlate PM 10 levels with vehicle numbers, establishment of new industries, introduction of cleaner fuels and other interventions. They also pointed that PM 10 is not an effective indicator for pollution caused by combustion sources like vehicles or waste burning. The CPCB should have provided with PM 2.5 data (fine, respirable pollution particles) to give a clearer picture.

55. South Korea Accuses Nissan of Cheating on Emissions Tests

South Korean environmental officials accused the Japanese carmaker Nissan Motor of cheating on auto emissions tests, and authorities called for one of the company's executives to face criminal charges. The case reflects the increasing pressure on global automakers, as the crisis that has engulfed Volkswagen reverberates across the industry.
The accusations against Nissan in South Korea mirror the emissions discrepancies that regulators in Europe have detected in a wide range of cars. While those discrepancies have not been considered illegal in Europe, regulators in South Korea say they violate local emissions standards, in the case of Nissan.

After Volkswagen’s deception emerged, South Korean officials started investigating the emissions systems of 20 diesel models in the country. As part of that effort, the Environment Ministry of South Korea said on Monday that it had discovered that Nissan had manipulated the emissions of its Qashqai diesel-power sport utility vehicle. The authorities said it had found problems with emissions levels in some other cars, but no cheating mechanisms like the one the Environment Ministry said it found in the Nissan model.

Nissan disputed the accusations, adding that the model in question had passed European pollution tests. The cars are made in Britain. “Nissan has not and does not employ illegal defeat or cheat devices in any of the cars that we make,” the automaker said in an email statement.

The potential hit to Nissan is more reputational than financial.

Officials ordered Nissan to recall 814 cars, the total sold in South Korea. The company was also ordered to pay a fine of 330 million won, or about $280,000, and to suspend sales of the Qashqai. The Environment Ministry also said it would ask prosecutors to indict the head of Nissan’s South Korean operations, Takehiko Kikuchi, on criminal charges of violating the country’s emissions law.

South Korean authorities have been particularly proactive in the wake of the Volkswagen scandal, as officials look to address the growing health concerns stemming from pollution.

Officials, who have raided the local offices of the German automaker, fined the company 14.1 billion won, or about $12 million, and ordered a recall of 125,000 vehicles. They have also asked prosecutors to indict two Volkswagen officials in South Korea on related charges. Prosecutors are still considering that request.

During the broader inquiry into diesel vehicles, investigators found that the defeat device used in the Nissan Qashqai was set to turn off its exhaust reduction system automatically under regular driving temperatures, the ministry’s statement said. It added that the system turned off when the engine’s intake temperature reached 35 degrees Celsius, or 95 degrees Fahrenheit. Other models turned off at higher temperatures.

Nissan said sales of the Qashqai, a compact crossover introduced in 2007 that resembles an S.U.V. and a hatchback, had reached one million vehicles by 2011. The Qashqai is sometimes marketed under the name Dualis.

While it is not sold in the United States and it is being phased out in Japan, the car has been especially important in Europe. The Qashqai is credited with helping raise Nissan’s market share in Europe, including Russia, to 4 percent last year, from 2.7 percent in 2009. That amounts to 715,000 units, out of Nissan’s roughly five million annual total.

Hong Dong-gon, director of the ministry’s Transportation Environment Division, said at a news conference that the ministry's emissions claims stem from an investigation conducted between December 2015 and April 2016 for 20 Euro VI-compliant domestic and imported diesel car models. The tests showed the presence of an automatic shutdown of a key emissions reduction
mechanism in the Qashqai, but not in other models during on-road emissions evaluations, Hong said.

“The [Qashqai’s] exhaust gas recirculation valve stops operating when engine air intake temperature reaches 35 degrees Celsius (95 degrees Fahrenheit)," which constitutes a violation of South Korean automotive regulations banning the use of defeat devices programmed to prevent the engine's emissions control system from working properly in normal driving conditions, Hong said.

As a result, the Qashqai's on-road emissions of nitrogen oxides exceeded the ministry's laboratory testing standard of 0.08 grams per kilometer by 20.8 times. The on-road emissions results of the other 19 models varied widely, exceeding the laboratory standard by between 1.6 times and 17 times.

According to the Korea Automobile Importers and Distributors Association, new imported car registrations in South Korea amounted to 243,900 in 2015 for a market share of 15.5 percent. About 70 percent of the imported cars sold in South Korea were diesel-powered.

56. South Korea Shortens Deadline to Address Seoul Air Pollution

South Korea moved up the target year for achieving European standards of urban air quality from 2024 to 2021 in response to the worsening pollution in the capital region in and around Seoul, the Ministry of Environment and five other ministries said on June 3rd. According to the ministries' plan, limiting pollution of PM-2.5 particles to 20 micrograms per cubic meter of air will be set for 2021 instead of 2024.

Air quality in the capital city of Seoul will be improved from the current 23 micrograms of PM-2.5 per cubic meter in 2015 to 18 micrograms in 2026, similar to air quality in Paris and London, if the 2021 target is met.

The plan does not require parliamentary action and goes into effect immediately.

Diesel exhaust pollution, which the government blames for 29 percent of particulate matter (PM-2.5 and PM-10) generation in the broader capital region, will take the brunt of the government-wide push for cleaner air as an extension of the ongoing clampdown on diesel vehicles.

All new diesel cars and other light-duty vehicles sold in South Korea must meet on-road emissions standards based on real-world driving conditions beginning in September 2017, the Ministry of Environment said last year. "On-road emissions evaluation will be conducted as an add-on to the existing laboratory testing program," the ministry said in a statement. "The enforcement of on-road emissions standards will contribute to tighter oversight of compliance with previous car emissions standards." On-road emissions are measured by a portable emission measurement system (PEMS) that works while a vehicle is in actual road use, rather than in a laboratory setting. The standards are being developed in conjunction with the European Union, which is studying its own on-road testing methods and standards for vehicles.

The new tests are needed to give a clearer picture of actual automobile emissions that can be affected by things like outside temperature, road slope variations, driving styles and even air conditioner use, the ministry said.
The current anti-diesel initiative will be expanded by introducing on-road emissions standards for
diesel vehicles weighing 3.5 tons or more in January 2017, ahead of smaller diesel vehicles
subject to real-driving emissions standards from September 2017.

In addition, the diesel clunker-scrapping program will be expanded to include vehicles made in
2005 or before, compared with 2000 currently. And all remaining city buses running on diesel will
be phased out completely by 2020.

The proportion of electric vehicles, hydrogen fuel cell vehicles and hybrid cars sold in the country
will be increased to 30 percent, or 1.5 million vehicles in 2020 compared with the previous target
of 20 percent or 1.08 million vehicles, under the government's goals.

Besides driver incentives such as purchasing-cost subsidies, tax waivers and expressway toll
discounts, charging stations nationwide will be expanded to 3,100 in 2020 from the current 337.

Coal-fired power plants, another major source of particulate matter, also are singled out in the
policy package, which calls for retiring 10 aging coal-fired power plants from the 53 in operation.
Coal-fired power plants planned or under construction will face the toughest emissions standards
available.

China comes into the policy picture as the single biggest transboundary source of particulate
matter for South Korea. Under the plan, the number of Chinese cities sharing air quality data with
South Korea will be increased from 35 now to 74 after 2016.

57. S. Korea Watchdog Questions Diesel-Cleanup Subsidies

South Korea's government watchdog agency is seeking changes in the Ministry of Environment's
2.74 trillion won ($2.34 billion) program to curtail air pollution from diesel exhaust, according to a
May 10 report. The report specifically criticizes an expensive reliance on devices meant to
mitigate pollution from older, dirty diesel vehicles. “There is a need for program readjustment in
light of the inefficiencies identified in some elements of the program,” including diesel particulate
filter (DPF) subsidies, said the Board of Audit and Inspection report.

The study examines the ministry's 10-year plan to reduce air pollution in and around Seoul under
the 2004 Special Act on the Improvement of Air Quality in the Capital Region. The second such
plan—covering 2015 through 2024—calls for 4.6 trillion won ($3.94 billion) fiscal spending on
various programs to meet numerical targets for particulate matter, nitrogen dioxide and ozone
levels in the Seoul area.

Most of the outlay, 66.5 percent, is earmarked for curbing automotive pollution. But 90.4 percent
of the automotive pollution budget goes to diesel particulate filter subsides and other diesel
pollution control programs.

The diesel particulate filter scheme alone will cost the government 706 billion won ($604 million),
the money going to subsidize installation and cleaning of particle trapping devices for 151,000
aging diesel vehicles through 2024. That's on top of the 1.3 trillion won ($1.1 billion) disbursed
from 2005 to 2014 on the subsidies for diesel particulate filters.

The audit pointed out that the rollout of the European Union's advanced EURO engine emissions
standards already underway in South Korea incrementally limits the effectiveness of diesel
particulate filter systems. “The DPF subsidy program needs a second look because advances in
engine technology and their adoption in newer diesel vehicles on the streets are already reducing the release of air pollutants from diesel engines,” the report said.

“The diminishing return on DPF subsidies warrants a scaling down in the program and reallocation of funding to other programs,” Bureau of Audit and Inspection spokesman Jeon Kwang-chun said.

Unlike in the U.S., diesel cars are popular in South Korea because of their lower fuel costs and higher fuel efficiency. According to government statistics, four out of every 10 new passenger car registrations are diesel.

The environment ministry estimates that 68 percent of all nitrogen oxides emissions in the capital region comes from transportation activity, and 76 percent of pollution from transportation sources in the region is attributable to diesel-powered vehicles.

The ministry is exploring options for a tougher clampdown on diesel vehicles, including restrictions on access to certain urban areas and mandatory recalls on vehicles exceeding emissions standards, an official at the Transportation Environment Division told the press. “These and other diesel policy initiatives are in early stages of development,” the official said.

The ministry also is ramping up collaboration between South Korea's National Institute of Environment Research and NASA on air pollution response across the wider region of South Korea. The joint project, known as Korea U.S.-Air Quality (KORUS-AQ), involves an investigation being conducted to assess air quality across urban, rural and coastal areas of South Korea using the combined observations of aircraft, ground sites, ships and satellites, according to the ministry and NASA.

58. Prosecutors Impound 1,000 Volkswagens, Audis

The Seoul Central District Prosecutors' Office recently impounded 956 Volkswagen cars suspected of either exceeding emission limits or being imported without the required tests. The cars are 292 Audi A1s, 314 Audi A3s and 350 Volkswagen Golf compacts with EA288 engines that supposedly meet the Euro 6 diesel emission standards of the EU.

The cars were imported from July 2015 to January of this year and stored at Pyeongtaek port.

Korea is the first country to impound diesel cars with Euro 6 engines with emission problems.

U.S. authorities discovered last year that Volkswagen tampered with emission test results on models with Euro 5 standard engines. The German automaker has denied tampering with test results of Euro 6 cars as well.

Prosecutors said the 350 Golf compacts are suspected of violating Korean environmental laws. "The vehicles meet emission standards for 30,000 km or less than three years after purchase, but after that emissions rise" a prosecution spokesman said. "We intend to find out whether this is due to a defect or due to software that has been programmed to do that."

The Audi A1 and A3, according to prosecutors, are suspected of having been imported without proper environmental certification. Importers need to submit certification documents to the Environment Ministry. "We are suspicious that the importer attempted to sell the cars here by abusing a loophole which allows them to pass the vehicles through customs without submitting environmental certification," the spokesman said.
Prosecutors also discovered that exhaust fumes seep through the pipes of the cars during test drives, making it impossible to test them properly.

Volkswagen denied the charges. "The cars with engines meeting Euro 6 standards have no problems. We will explain this to prosecutors to resolve any suspicions," a company spokesman said.

59. Report to MLIT Concerning Improper Conduct by Mitsubishi Motors Corporation

The following is a summary of the report submitted by Mitsubishi Motors Corporation (MMC) to the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), pursuant to instructions received from MLIT on April 20 to investigate improper conduct in fuel consumption testing of vehicles manufactured by MMC.

MMC's improper manipulation of running resistance to present better fuel consumption rates began with the development of the fuel-economy grade for the model year 2014 eK Wagon and Dayz (Application for the certifications submitted February 2013). Running resistance for other grades (standard grade, turbo grade, 4WD grade) as well as for the eK Space and Dayz Roox and each model year change were simulated using testing data from the fuel-economy grade vehicles.

During the development of the fuel-economy grade, the fuel consumption target was raised a total of five times, from 26.4km/L to 29.2km/L. Development progressed based on an overly optimistic outlook because of deep concern regarding new competitor fuel consumption levels, even though realistic attainment of the targets was problematic.

The coordinators at the time were well aware that fuel consumption meant "the factor that would give the most product marketing appeal;" so they felt that the fuel consumption improvement targets requested by managers and executives were absolute.

Administrative managers in development-related departments did not communicate well enough with the subcontractor so did not confirm the real situation, even though they understood the problematically high fuel consumption targets.

Based on the above issues, drastic reforms are being considered in order to prevent recurrence.

Internal hearings suggest that running resistance was improperly calculated in nine other models currently sold in Japan, as well as in other models no longer sold in Japan. The use of desktop calculations is also suspected on the RVR and some other models, and investigations into the background and details are ongoing and will be announced separately.

On April 25 a Special Investigation Committee ("Committee") consisting entirely of outside experts was established to investigate this matter more thoroughly, including the reasons for and details behind MMC’s use of the high-speed coasting test. After receiving the Committee's advice and recommendations MMC will formulate proper measures and will submit a separate report.

60. Suzuki Shrugs Off Use of Wrong Ploy to Test Fuel Economy

Suzuki Motor Corp shrugged of use of wrong methods to test fuel economy of its cars in Japan, saying there was no universal method of calculating mileage. A fortnight after Suzuki Motor
admitted using an improper method to test the fuel efficiency of its vehicles, its Chairman Osamu Suzuki said the methods of calculating mileage differ from country to country.

On May 18, Suzuki Motor had stated that it had used the wrong methods to test the fuel economy of its cars in Japan, but claimed that these didn’t make the final results very different. Also, it did not affect cars sold by the company outside its home market.

Its India unit, Maruti Suzuki had stated that the issue of using improper fuel economy and emission tests faced by parent Suzuki Motor Corp in Japan will not have implications in India citing distinct testing regulations. “The system of conducting vehicle mileage tests in India is distinct from the one in Japan. In India, all vehicles are tested for road load and emissions by government approved agencies like ARAI, ICAT and VRDE,” a Maruti Suzuki India spokesperson had said in a statement.

Suzuki Motor was the first automaker to come forward and admit potential wrongdoing after Japan’s transport ministry asked companies to conduct internal investigations after Mitsubishi Motors overstated the ratings of four minicar models by as much as 10 per cent.

It had stated that as many as 2.1 million vehicles in Japan were affected including models like Alto, Alto Lapin, Wagon R, Hustler, Spacia, Every, Carry, Jimny, Solio, Ignis, Baleno, S-Cross, Swift, Escudo 2.4, Escudo and Jimny Sierra.

While some of the models carry the same names as those sold in India, the technical specifications are usually different.

61. Cities Key to China's Quest to Peak Greenhouse Gas Emissions

With about 90 percent of China's greenhouse gas emissions emanating from its cities, government officials and researchers are pushing for municipalities to lead the country toward its goal of declining emissions in less than 15 years.

Several cities, such as South China's Shenzhen, have pledged to hit their peak year much earlier than 2030, which the country has set as the absolute latest it will hit its annual emissions peak—after which emissions will begin to fall. Much of the effort is being made through studying urban design, transportation, energy-efficient building policies and adoption of lower carbon technologies.

Among the tools cities will use are renewable energy and electric and hybrid vehicles integrated into overall urban planning policies.

There are 42 pilot low-carbon development cities in China and another 23 that have pledged to peak carbon emissions, most ahead of the national 2030 target, said Yang Hongwei, director of the Energy Efficiency Center of the Energy Research Institute under the commission. Shenzhen is among the most ambitious, with a goal to peak emissions by 2022.

In recent years, Shenzhen—sometimes called China’s Silicon Valley—has been transforming from an industrial center to one focused on innovation. “Higher value-added industries have less energy consumption to produce [products and services],” said Tang Jie, former deputy mayor of the city. “It is a move away from resources input to innovation input, with industrial growth driven by things like new energy technology and environmental protection technology.”
62. China Could Push Others into Environmental Goods Pact

A revised Chinese proposal that would encourage countries to cut tariffs on environmental products drew skeptical reactions from trade negotiators in Geneva. China circulated a one-page proposal on June 23rd, during the Environmental Goods Agreement (EGA) negotiations, with a provision aimed at preventing countries from benefiting as “free riders” to the plurilateral trade deal. Specifically, the provision would require any World Trade Organization (WTO) members that are responsible for a yet-to-be determined percentage of world trade in EGA products to either join the deal or relinquish their ability to benefit from the EGA's tariff cuts.

Chinese trade negotiators privately told EGA participants that their concerns about “free riders” are specifically focused on India and Brazil, which aren't participating in the negotiations.

The EGA is being negotiated among a subset of 17 WTO members—such as the European Union, Japan, South Korea and the U.S.—that account for roughly 80 percent of global trade in over 200 products that could help reduce the effects of climate change. The 118 WTO members who don't participate in the accord would still benefit as free riders to the deal, because EGA signatories would apply their tariff cuts on a most-favored nation (MFN) basis to all members once a critical mass threshold is met. The MFN policy—outlined in the WTO's General Agreement on Tariffs and Trade (GATT)—extends concessions or beneficial trade terms to all WTO members.

The Chinese proposal contained a critical mass provision to ensure the EGA would only take effect when its participants are responsible for at least 90 percent of world trade in the covered products under the agreement. The text would require the WTO secretariat to annually calculate the percentage of world trade represented by EGA participants on the basis of the most recent three-year data available.

The proposal also said if non-WTO countries show interest in becoming EGA members, their participation “should be given positive consideration as part of their accession package” to join the WTO.

63. China Prosecutors Win Landmark Lawsuit against Environmental Department

Chinese prosecutors have successfully sued a county environmental agency for inadequately punishing a sewage firm that produced dye without appropriate safeguards, the first-such public interest case against a government department. The Supreme People's Procuratorate, China's top prosecutor, said prosecutors had successfully proved that the environmental protection department in eastern Shandong province had committed "illegal acts" in its dealings with the Qingshun Chemical Technology Company.

The case was filed last December in the Qingyun County court, with such departments coming under increasing scrutiny amid growing public discontent over pollution.

In 2014, the sewage firm was found to have produced dye without adequate safeguards but the environmental protection bureau in the county imposed only nominal administrative punishments and allowed the company to start trial operations, the court said.

The case was described by the Supreme People's Procuratorate at the time as China's first "administrative public interest litigation case" after the National People's Congress had earlier authorized prosecutors to file such lawsuits in a pilot program.
Last year, China’s Supreme Court said it would give environmental groups the power to sue before any pollution had occurred if they could show that a particular activity could threaten the public interest.

64. Passenger Car Ownership to Jump 775% in India over Next 24 Years: Study

Passenger vehicle ownership has nearly tripled in the past decade, bringing with it a strong increase in tailpipe and non-exhaust emissions and causing damage to human health, the report by International Energy Agency (IEA) said. Coordinated urban planning and investment in public transport as proposed in the government’s smart city mission offer a “promising” avenue to curb transport-related air pollution, it said.

"In the new policies scenario, passenger car ownership grows from less than 20 vehicles per 1,000 inhabitants today to 175 cars per 1,000 people in 2040, and overall road passenger vehicle activity increases more than six-times," the World Energy Outlook (WEO) report said.

Despite fuel economy improvements in the light and heavy duty vehicle fleets, transport oil demand is expected to rise from its present 1.5 million barrels per day (mb/d) to more than 5 mb/d in 2040.

On the government’s move to adopt Bharat VI emission standard nationwide by April 2020 after skipping Bharat V, the report said implementing these standards will limit gasoline and diesel fuels to 10 parts per million (ppm) of sulfur, "bringing India into line with the global leaders in fuel sulfur standards". "The projected adoption of Bharat VI does constrain the growth in air pollutant emissions from transport. The decline is underpinned by increasing stringency of standards for HDVs with a key role for buses," the report said.

It said around three-quarters of total passenger vehicle-kilometers in India today are driven in urban areas. "Coordinated urban planning and investment in public transport, as envisaged in the Smart Cities Mission, offer a promising avenue to curb transport-related air pollution.

65. Indian Auto Industry Leaders Meet PMO Officials Over Diesel Ban

Auto industry leaders took up the issue of ban on big diesel cars and SUVs in Delhi-NCR with the PMO while seeking a solution on how to replace old polluting vehicles. Representatives of Society of Indian Automobile Industry (SIAM) and heads of automobile companies, including Maruti Suzuki India, Ford India and Toyota Kirloskar Motor met PMO officials, including Principal Secretary to PM, Nripendra Misra.

"The primary agenda of the meeting was the ban on diesel cars and SUVs with engine capacity of 2,000cc and above in Delhi-NCR by the Supreme Court and to find a way forward," an industry source told reporters. Another source said while the diesel ban was the top of the agenda, the meeting also discussed as to how government and the auto industry must work together to address pollution due to ageing vehicles. "Fleet replacement and scrapping of old vehicles were also discussed," the source added.

In December last year, the Supreme Court had banned sale of diesel cars and sport utility vehicles with engines of 2,000 cc and above in the wake of rising pollution in the city. It is likely to take up the matter next month. The National Green Tribunal had also imposed a similar ban in Kerala but has been stayed by the state high court.
The developments led to some automakers reworking their plans and introducing models with petrol options or smaller diesel engines.

Earlier in June Environment Minister Prakash Javadekar had said the ban on diesel cars and SUVs with engines above 2,000 cc in Delhi-NCR by courts "is not the right way". Calling it "unfortunate", he said the government is already taking measures to curb pollution, and the ban has resulted in vehicles with latest technologies not being allowed while old polluting vehicles continue plying on the roads.

66. Power Surge Plan for Electric Vehicles in Works in India

Allowing 16-year-olds to drive electric bikes and free charging stations for battery-operated vehicles. These are among the proposals that India may implement as it seeks to make electric vehicles more ubiquitous in cities choking on diesel and petrol fumes.

A government panel is giving the finishing touches on the report that will form the basis of the program, which is ambitious in scope considering that the presence of electric vehicles on Indian roads is minuscule and the power network not really well placed to supply electricity to even regular consumers in large parts of the country.

"In scooters, three-wheelers and city taxis, we expect tactical shifts," said a top official involved with the effort. "Permits will be liberalized for e-vehicles in these categories. The number of e-vehicles in the segments can go up as high as 25-30%... in the next few years."

The program will be implemented in conjunction with the National Electric Mobility Mission Plan (NEMMP) and aims to get 6-7 million electric vehicles on the roads by 2020.

The panel was set up following a meeting of ministers Nitin Gadkari (roads), Piyush Goyal (power, renewable energy), Prakash Javadekar (environment) and Dharmendra Pradhan (oil) on the best way to advance agenda on electric vehicles. The panel has been set up to draft a report as a joint effort by the ministries mentioned above.

Four key initiatives are among those that have been discussed and are likely to be part of the draft: Viability gap funding (VGF) to state transport undertakings (STUs) for hiring electric buses, Liberalizing permits for battery powered auto-rickshaws, city taxis, Lowering the minimum age to 16 for riding electric scooters (from 18 for all vehicles), and Setting up charging infrastructure and providing free charging/free parking in public places for at least two-three years.

In the first phase, the incentive for STUs to rent electric buses will be implemented in the eight biggest cities. A nodal agency may be set up subsequently to extend it.

"While the National Electric Mobility Mission Plan has been designed to develop an ecosystem and a supplier base which would help automakers manufacture electric vehicles locally at competitive costs, this program is more broad-based and citizen-centric," said the person cited above. "It will generate awareness and promote usage of electric vehicles."

India first offered tangible support to the electric vehicle industry at the end of 2010, with the new and renewable energy ministry announcing a Rs 95-crore incentive scheme me for manufacturers. Import duty on batteries was cut to 4% from 26%. Price rebates of up to 20% were also offered, subject to a maximum of Rs 1lakh for an electric car.
Under the NEMMP 2020 scheme approved in 2012, the government was to invest up to Rs 14,000 crore in creating infrastructure and promoting the use of environment-friendly electric vehicles. Industry was to pitch in the extra Rs 10,000 crore required to develop products and create a manufacturing ecosystem. NEMMP is projected to help save 2-2.5 million tons of fossil fuels by 2020. Carbon dioxide emissions are projected to come down by up to 1.5%.

Chetan Maini, founder of what is now Mahindra Reva Electric Vehicle Co and Indian Institute of Technology Madras professor Ashok Jhunjhunwala are members of the committee along with joint secretaries of the departments mentioned above. Funding details are yet to be nailed down but the Centre expects the program to lead to 25-30% of the two-wheeler, three-wheeler and city taxi population in the country to be electric in the next few years.

The final program report is scheduled to come up for discussion by the ministers of the stakeholder ministries of roads, power, heavy industries, petroleum and renewable energy. Jhunjhunwala declined to comment on the report.

Industry executives said the electric vehicle industry is at a nascent stage with volumes comprising less than 1% of total vehicles sales, with lack of infrastructure a major hurdle. Experts point out that large swatches of the country are yet to get regular, stable power supplies. "Awareness is growing but a lot more needs to be done in setting up requisite charging infrastructure," said Sohinder Gill, director, Society of Manufacturers of Electric Vehicles (SMEV).

At the last count, India had about 100 charging points for electric vehicles. Electric two-wheelers can average 50-55 km on a full charge and four-wheelers about 100 km. Range anxiety, or the fear of running out of charge with no dependable power source near at hand, is a major deterrent in the adoption of vehicles that run solely on battery power.

AFRICA

67. Nigeria Is Home To City with Worst PM10 Levels

Four of the worst cities in the world for air pollution are in Nigeria, according to data released by the World Health Organization (WHO). Onitsha -- a city few outside Nigeria will have heard of -- has the honor of being labeled the world's most polluted city for air quality, when measuring particulate matter concentrations (PM10). A booming port city in southern Nigeria, Onitsha recorded 30 times more than the WHO's recommended levels of PM10.

The other three cities named and shamed in the WHO report for high PM10 levels are the transport hub of Kaduna, in the north, which came fifth, followed by the cities of Aba -- in sixth place -- and Umuahia, in 16th position, which are both trade centers in southern Nigeria.

Last year, the World Bank reported that 94% of the population in Nigeria is exposed to air pollution levels that exceed WHO guidelines (compared to 72% on average in Sub-Saharan Africa in general) and air pollution damage costs about 1% post of Gross National Income.

The WHO study tracked the growth in the two different sizes of particulate matter, PM10 and PM2.5, per cubic meter of air.

"The contributing factors to pollution are a reliance on using solid fuels for cooking, burning waste and traffic pollution from very old cars," Dr Maria Neira, WHO Director, Department of Public Health, Environmental and Social Determinants of Health, told the press.
At home, due to unreliable electricity supplies, many Nigerians rely on generators, which spew out noxious fumes often in unventilated areas.

On the street, car emissions go unregulated.

Neira adds: "In Africa, unfortunately, the levels of pollution are increasing because of rapid economic development and industry without the right technology." Indeed, Nigeria's economy has raced forward in the past decade, overtaking South Africa as the continent's largest economy in 2014, following a recalculation of its GDP. Agriculture, telecoms and oil are all driving this growth -- at a certain environmental cost.

The latest WHO report may highlight Nigeria, but the true story in other parts of the African continent remains unknown. The report only included pollution levels from cities with a population of over 100,000 residents that monitor their pollution levels -- something many African cities don't do.

With more than 50% of the African population predicted to live in cities by 2030, according to global accounting firm KPMG, the health of the continent's urban areas is a key concern.

**GENERAL**

**68. UN Warns of Continued Lethality of Air Pollution**

Air pollution-related deaths worldwide, already estimated at 7 million people a year, will continue to rise without stringent actions, especially in the developing world, according to reports presented at the Second Session of the United Nations Environment Assembly (UNEA-2) in Nairobi, Kenya.

Urban air pollution levels alone increased by 8 percent between 2008 and 2013, according to statistics from the UN Environment Program and the World Health Organization. “This makes air pollution the leading environmental cause of premature deaths,” said UNEP Executive Director Achim Steiner, speaking on May 24th. Exposure to polluted air can contribute to heart disease, strokes, cancer and respiratory diseases, he said.

A major issue in poor countries remains open fires for cooking and heating, said Steiner, who presented a UN report on global air pollution. “Over 3 billion people continue to use solid fuels and open fires for cooking and heating and the number is expected to increase unless actions are taken to increase access to cleaner cooking fuels and stoves, renewables and low-sulfur content fuels,” said Steiner.

Daniel Reifsnyder, U.S. deputy assistant secretary for environment, called on countries to adopt tougher auto emissions standards. He said vehicle emissions could be cut by 90 percent with worldwide adoption of European Union-level emissions standards for fuels and automobiles.

Only 29 percent of countries have adopted 2005-level Euro 4 emissions standards—which have been tightened twice in the past decade in the EU—according to Reifsnyder.

Under the Euro 4 emissions standard, the maximum allowable sulfur content is 50 parts per million (ppm), said Rob de Jong, the UNEP head of transportation. “But out of 193 countries surveyed by UNEP, only 66 countries, amounting to 34 percent, have a 50 ppm or better standard.” North America, some of North Asia and most of Europe have stringent standards for both light- and
heavy-duty vehicles and provide ultra-low-sulfur fuels. Subsequently, this has resulted in lower emissions in the transportation sector in those parts of the world.

69. WHO Finds Air Pollution Up in Poor Cities

Global urban air pollution rose 8 percent from 2008 to 2013, and nearly all 300 cities in low- and middle-income nations included in a study had air-quality levels worse than World Health Organization standards, the WHO reported May 12th. About half the cities in wealthy countries, primarily in Europe and the Americas, had excessive pollution, WHO said.

Sulfates, nitrates, black carbon and other air pollutants are among the greatest environmental health risks, causing more than 3 million premature deaths worldwide annually, with the youngest, oldest and poorest facing the most risk, according to WHO’s latest urban air quality database.

“It is crucial for city and national governments to make urban air quality a health and development priority,” Carlos Dora, an epidemiologist with the WHO, said. “When air quality improves, health costs from air pollution-related diseases shrink, worker productivity expands and life expectancy grows.”

More than 80 percent of people living in urban areas, who help monitor air pollution, are exposed to air quality levels that exceed WHO limits, according to the statement. In the past two years, the database has nearly doubled to 3,000 cities in 103 countries as awareness increases, the WHO said.

Cities in Iran, India, Saudi Arabia, China, Pakistan and Bangladesh made up most of the top 30 most-polluted urban areas with the highest levels of particulate matter in the 2.5 micron range—tiny, toxic particles that lead to respiratory diseases.

While India accounted for 14 of the 30 worst polluted cities in the world, other prominent ones were Saudi Arabia’s capital Riyadh, industrial center Al Jubail and Dammam. The Chinese cities of Xingtai, Baoding, Shijiazhuang, Handan, Hengshui and Tangshan—all in Hebei province—also figure among the top 30.

70. Air Pollution Among the Causes of High Blood Pressure

Air pollution doesn't just target a person's respiratory system. Dirty air and smog are also causing high blood pressure among people.

Around 328,000 individuals were examined in polluted areas in Brazil, Canada, China, Denmark, Germany, Iran, Spain, Sweden, Taiwan and the United States. Tao Liu, epidemiologist and the author of the study published in the journal Hypertension, said air pollutants like coal burning, vehicle exhaust and airborne air or dust have short-term and long-term effects on high blood pressure risks.

Short-term effects include temporary high blood pressure, or hypertension, which may require hospitalization. However, people living in highly polluted areas for many years may end up with chronically high blood pressure that can lead to stroke and heart diseases.

Other causes of high blood pressure are genes, diet and environmental factors and lifestyle practices, HealthDay further reported. Liu and Dr. Gregg Fonarow, a professor of cardiology at
the University of California, Los Angeles, said the recent study should urge authorities to do more measures in decreasing air pollution levels.

Fonarow said cleaner air has cardiovascular benefits, and advised people living in highly polluted areas to exercise more and to refrain from outdoor activities if it can be helped. Liu, meanwhile, recommended the use of air purifiers in residential homes.

In the U.K., air pollution is to be blamed for around 50,000 deaths annually. The government is being urged to introduce a scrappage system for old vehicles that use dirty diesel and emit harmful nitrogen oxide particles.

Beijing, China, one of the world’s most polluted cities, has been making improvements in lowering its smog levels. Beijing is using a combination of energy structure optimization, coal-fired emission control, vehicle emission control and heightened air quality monitoring.

India, Nigeria, Pakistan and Saudi Arabia have alarming pollution levels. The cities of London, New York and Sydney, meanwhile, saw decreasing levels of smog thanks to tougher government measures, the Guardian listed.

71. April Breaks Global Temperature Record, Marking Seven Months Of New Highs

April 2016 was the hottest April on record globally – and the seventh month in a row to have broken global temperature records. The latest figures smashed the previous record for April by the largest margin ever recorded.

It makes three months in a row that the monthly record has been broken by the largest margin ever, and seven months in a row that are at least 1C above the 1951-80 mean for that month. When the string of record-smashing months started in February, scientists began talking about a “climate emergency”.

Figures released by NASA show the global temperature of land and sea was 1.11C warmer in April than the average temperature for April during the period 1951-1980. It all but assures that 2016 will be the hottest year on record, and
The new record broke the previous one by 0.24°C, which was set in 2010, at 0.87°C above the baseline average April. That record itself broke one set three years earlier at 0.75°C above the baseline average for April.

The current blast of hot air around the globe is being spurred by a massive El Niño, which is a release of warm water across the Pacific Ocean. But it’s not the biggest El Niño on record and that spike in temperatures is occurring over a background of rapid global warming, pushing temperatures to all-time highs.

“The interesting thing is the scale at which we’re breaking records,” said Andy Pitman, director of the ARC Centre of Excellence for Climate System Science at the University of New South Wales in Australia. “It’s clearly all heading in the wrong direction.”

Pitman said the recent figures put the recent goal agreed in Paris of just 1.5°C warming in doubt. “The 1.5°C target, it’s wishful thinking. I don’t know if you’d get 1.5°C if you stopped emissions today. There’s inertia in the system. It’s putting intense pressure on 2°C,” he said.

The record temperatures were wreaking havoc with ecosystems around the world. They’ve triggered the third recorded global coral bleaching, and in Australia 93% of the reefs have been affected by bleaching along the 2,300km Great Barrier Reef. In the northern parts of the reef, it’s expected the majority of coral is dead, and on some reefs over 90% of the coral is dying.

A recent analysis showed the bleaching on the Great Barrier Reef was made 175 times more likely because of climate change, and the conditions that caused it would be average in fewer than 20 years.

The April figures come as the symbolic milestone of CO2 concentrations of 400 parts per million (ppm) have been broken at the important Cape Grim measuring station in Tasmania, Australia.

72. Ex-Mexican Foreign Minister Espinosa Nominated As U.N. Climate Chief

Former Mexican Foreign Minister Patricia Espinosa has been nominated to be the new U.N. climate chief, helping to bolster a 2015 Paris Agreement to shift the world economy from fossil fuels, officials announced. Christiana Figueres, a Costa Rican who is stepping down in July after a six-year term as head of the U.N. Climate Change Secretariat, wrote in a Tweet that U.N. Secretary-General Ban Ki-moon had nominated Espinosa to succeed her.
The Bonn-based Secretariat said the appointment needs to be approved by an 11-member U.N. bureau, whose members represent groups of governments worldwide and is now led by French Environment Minister Ségolène Royal. The bureau has no record of challenging nominations by the Secretary-General, diplomats say, even though some had expected that the job would shift from Latin America.

Espinosa, aged 57 and who works as Mexico's ambassador to Germany, won high marks for presiding at annual U.N. climate negotiations in Cancun, Mexico, in 2010 when she was foreign minister. Delegates gave her a standing ovation after she brokered a deal to get negotiations on limiting global warming back on track after the failure of a fractious 2009 summit in Copenhagen.

Those 195-nation talks culminated in December 2015 with a deal at a Paris summit to cut greenhouse gas emissions to net zero by 2100, shifting to cleaner energies such as wind and solar power. The job of the new U.N. climate chief will be to oversee and strengthen that agreement.

The United Nations says the Paris deal, built from voluntary national limits on greenhouse gas emissions, is too weak to achieve a goal of limiting a rise in temperatures blamed for stoking more droughts, floods, heat waves and rising sea levels.

**73. Nikola One 2000-Hp Natural Gas-Electric Semi Truck Announced**

Nikola Motor Company will launch a natural gas-electric semi-truck called the Nikola One, and an all-electric Utility Task Vehicle (UTV) called the Nikola Zero.

Nikola was founded by Trevor Milton several years ago, and has apparently been operating in the "stealth mode" common among tech startups. Milton was previously CEO of dHybrid Systems, which specialized in natural gas storage, so the use of natural-gas fuel for Nikola's semi-truck perhaps isn't too surprising.

Nikola One natural gas-electric semi-truck

The Nikola One has a turbine that is used to generate electricity for a 320-kilowatt-hour battery pack.

The turbine can actually run on a variety of fuels, but trucks will be equipped with natural-gas tanks from the factory.
Turbine power and regenerative braking are the only charging methods, as the Nikola One does not come with a plug. Six electric motors produce a combined 2,000 horsepower and 3,700 pound-feet of torque, which is sent to the wheels via a two-speed transmission.

With a full 150-gallon tank of fuel, Nikola claims the truck will be able to travel 1,200 miles between fill-ups. It also claims operating costs will be around half those of conventional diesel semi-trucks.

First, though, operators will have to pay a base price of $375,000, including a refundable $1,500 deposit. To sweeten the deal, Nikola is offering 100,000 gallons of free natural gas with the first 5,000 reservations.

Nikola is planning a network of 50 fueling stations, but says it will also credit customers for fuel they purchase at stations outside its network. The new stations will be needed to provide adequate fueling infrastructure, which has been one of the main obstacles to wider adoption of natural-gas vehicles.

Nikola’s second vehicle, meanwhile, will be all electric and likely reserved for off-road use.

![Nikola Zero electric UTV](image)

A solar roof charges the 12-volt battery that powers accessories, taking some strain off the main lithium-ion battery pack.

Nikola will also offer a generator that it claims can charge the battery pack in around 2 hours, along with a J1772 connector for 240-volt Level 2 AC charging.

The Nikola Zero will start at $42,000, with a $750 refundable deposit.

Right now, though, both the UTV and the Nikola One semi exist only as renderings. The company plans to show the first "working prototypes” later this year, but hasn’t committed to a launch date.

### 74. Rise in Larger Vehicle Sales Propping Gasoline Demand

Last year, SUVs outsold any other type of passenger vehicle in Europe for the first time, according to auto industry consultants JATO Dynamics. The trend has continued in 2016, with demand for SUVs such as the Hyundai Tucson and the Renault Kadjar accounting for a quarter of sales in the biggest European countries.
Europe is a mirror of what is happening across the world. From China to the U.S., drivers are buying bigger vehicles, while sales of fuel-efficient hybrids struggle.

For Saudi Arabia, Iran and other members of the Organization of Petroleum Exporting Countries the sharp increase in sales of gas-guzzlers is good news: It means stronger demand for gasoline and diesel for years to come.

“The trend of fuel-efficiency improvement of the last few years could be stopped by low oil prices,” said Christof Ruhl, head of research at the Abu Dhabi Investment Authority, the emirate’s sovereign wealth fund and a former chief economist at BP Plc. Take the U.S., home of the oil shale revolution and the world’s largest oil consumer. The average car sold in April achieved a fuel economy of 25.2 miles per gallon, down from a peak of 25.8 set in August 2014, just before oil prices crashed, according to data from the Transportation Research Institute at the University of Michigan. At current trends, this year will mark the first drop in average U.S. fuel economy since at least 2007, the data show.

Today in the U.S., light trucks, vans and SUVs account for 60 percent of total vehicle sales—a level reached only briefly in 2005, when Brent crude, the global oil benchmark, averaged $55 a barrel. It is now around $50. The International Energy Agency said in May that less-efficient vehicles, including four-wheel drives, “remain very much in vogue, a consequence of persistently lower retail pump prices.”

In 2008, when oil prices averaged $100 a barrel, the share of gas guzzlers in U.S. total vehicles sales dropped at one point to just 43 percent.

Popular light trucks such as the Ford F-150, Chevrolet Silverado and Dodge Ram achieve as little as 17 to 22 miles a gallon compared with as much as 50 to 55 miles for smaller, more efficient cars.

With larger vehicles hitting the roads and Americans driving longer distances as the economy recovers, U.S. gasoline consumption is set to rise to a record in 2016, according to the Energy Information Administration. U.S. gasoline demand will average 9.3 million barrels a day this year, surpassing the peak set in 2007, the...
EIA said in its most recent monthly report.

U.S. demand for motor fuel peaks between the Memorial Day holiday in late May and Labor Day in early September, when Americans traditionally take vacations. The EIA forecasts U.S. drivers will enjoy the cheapest gasoline this driving season in 12 years.

In China, the world's second-biggest oil consumer, drivers also are opting for larger vehicles as never before. While cheaper gasoline and diesel helps, analysts said it is higher incomes—and a desire to impress relatives and friends—that is driving the purchases. According to official data, vehicles such as light trucks and SUVs accounted for almost 35 percent of total Chinese passenger sales in April, up from 10 percent in 2010 and less than 5 percent a decade ago. “Consumers are thinking that a period of plentiful oil supply is here to stay,” said Ruhl of the Abu Dhabi Investment Authority. Perversely, their behavior could mean that oil prices rise sooner rather than later, as fuel-thirsty vehicles help demand catch up with supply.

75. Container Shipping Firms' Costs Soar on New Fuel Rules: OECD

Container shipping firms' annual costs have risen by a total $500 million due to new sulfur emissions regulations that have forced vessels to use higher cost fuel, the OECD said in a report. Rising fuel costs will further hurt an industry already stung by overcapacity, low demand and falling rates.

From January 2015, ships entering Emissions Control Areas from the Baltics to the North American coast had to switch to ship fuels with less than 0.1 percent sulfur content, from 1 percent, as part of a campaign to combat marine pollution.

An even lower cap of 0.50 percent is planned for 2020 and it could add annual total costs of around $5 billion to $30 billion for the container shipping industry, the Organization for Economic Co-operation and Development (OECD) report said. For an industry operating on very slight margins it represents significant cost increases, partly mitigated by falling fuel prices, the report said. "We will assume that container shipping lines have limited possibility to absorb cost increases, so they will likely transfer these to their customers," it said.

According to OECD calculations a global sulfur cap of 0.5 percent in 2020 mean costs for transporting agricultural goods could rise by as much as 7.5 percent, manufactured goods by 3.5 percent and industrial raw materials by 16.4 percent.

Maersk Line, the global container shipping market leader, has said weak enforcement combined with the significant cost burden could prompt some shipping companies to flout the rules. It spent $6.1 billion on ship fuel last year of which 7 percent spent on buying the more expensive fuel. "Considering the significant costs to the shipping industry, effective enforcement is of utmost importance to guarantee a level playing field,” OECD said. The report said fines imposed rarely surpass the cost advantage of ignoring sulfur emissions restrictions.

76. Mobile Monitoring of Particle Number near A Highway Shows High Variability

Accurate quantification of exposures to traffic-related air pollution in near-highway neighborhoods is challenging due to the high degree of spatial and temporal variation of pollutant levels. The
objective of this study was to measure air pollutant levels in a near-highway urban area over a wide range of traffic and meteorological conditions using a mobile monitoring platform. The study was performed in a 2.3-km² area in Somerville, Massachusetts (USA), near Interstate 93 (I-93), a highway that carries 150,000 vehicles per day. The mobile platform was equipped with rapid-response instruments and was driven repeatedly along a 15.4-km route on 55 days between September 2009 and August 2010. Monitoring was performed in 4–6-h shifts in the morning, afternoon, and evening on both weekdays and weekends in winter, spring, summer, and fall. Measurements were made of particle number concentration (PNC; 4–3000 nm), particle size distribution, fine particle mass (PM2.5), particle-bound polycyclic aromatic hydrocarbons (pPAH), black carbon (BC), carbon monoxide (CO), and nitrogen oxides (NO and NOx). The highest pollutant concentrations were measured within 0–50 m of I-93 with distance-decay gradients varying depending on traffic and meteorology. The most pronounced variations were observed for PNC. Annual median PNC 0–50 m from I-93 was two-fold higher compared to the background area (>1 km from I-93). In general, PNC levels were highest in winter and lowest in summer and fall, higher on weekdays and Saturdays compared to Sundays, and higher during morning rush hour compared to later in the day. Similar spatial and temporal trends were observed for NO, CO and BC, but not for PM2.5. Spatial variations in PNC distance-decay gradients were non-uniform largely due to contributions from local street traffic. Hour-to-hour, day-to-day and season-to-season variations in PNC were of the same magnitude as spatial variations. Datasets containing fine-scale temporal and spatial variation of air pollution levels near highways may help to inform exposure assessment efforts.

Highlights

► Mobile monitoring was performed on 55 days throughout one year.
► Hourly, daily, and seasonal variations were observed.
► Distance-decay gradients were highly dependent on traffic and meteorology.
► Annual median PNC 0–50 m from the highway was two-fold higher than background.
► Temporal variations in PNC were similar to spatial variations.

77. New OECD Report Paints an Alarming Picture of Air Pollution Impacts

Outdoor air pollution could cause 6 to 9 million premature deaths a year by 2060 and cost 1% of global GDP – around USD 2.6 trillion annually – as a result of sick days, medical bills and reduced agricultural output, unless action is taken, according to a new OECD report. The Economic Consequences of Air Pollution finds the consequent reduction in global economic output by 2060 will equate to around USD 330 per person, as annual healthcare costs related to air pollution rise to USD 176 billion from USD 21 billion in 2015 and the number of work days lost to air pollution-related illness jumps to 3.7 billion from 1.2 billion.

“The number of lives cut short by air pollution is already terrible and the potential rise in the next few decades is terrifying. If this is not motivation enough to act, this report shows there will also be a heavy economic cost to not taking action,” said OECD Environment Director Simon Upton, presenting the report at the 8th Environment for Europe Ministerial Conference in Batumi, Georgia. “We must prevent these projections from becoming reality.”

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2 Atmospheric Environment, Volume 61, December 2012, Pages 253–264, Luz T. Padró-Martínez a, Allison P. Patton a, Jeffrey B. Trulla, 1, Wig Zamore b, Doug Brugge c, John L. Duranta, ,
Outdoor air pollution caused more than 3 million premature deaths in 2010, with elderly people and children most vulnerable. The OECD projections imply a doubling, or even tripling, of premature deaths from dirty air – or one premature death every four or five seconds – by 2060.

The biggest rises in mortality rates from air pollution are forecast in India, China, Korea and Central Asian countries like Uzbekistan, where rising populations and congested cities mean more people are exposed to power plant emissions and traffic exhaust. Premature death rates are forecast to be up to three times higher in 2060 than in 2010 in China and up to four times higher in India. Death rates are seen stabilizing in the United States and falling in much of Western Europe thanks in part to efforts to move to cleaner energy and transport.

Projected GDP losses will be biggest in China, Russia, India, Korea and countries in Eastern Europe and the Caspian region, as health costs and lower labor productivity hit output. Poor air quality will hit China’s economy harder than India’s because differences in household savings rates and demographics mean the knock-on effects of lower productivity and increased health spending on the rest of the Chinese economy will be much larger.

A reduction in crop yields as a result of dirty air will weigh on most countries’ economies. Exceptions will include Brazil, Russia and some Latin American countries where agricultural land is set to be less affected, meaning improved export competitiveness and thus economic gains.

The report also examines the negative impact of outdoor air pollution in terms of the price people would be willing to pay each year to not have their health impaired or their lives cut short by it. This hypothetical annual value of air pollution is seen rising from less than USD 500 per person in 2015 to as much as USD 2,800 in 2060.
Leading sources of air pollution include vehicles, especially diesel-engined models, the heating and cooling of large buildings, waste management, agriculture and the use of coal and diesel in power generation.

78. Air Pollution to Kill Millions More Without Energy Policy Change: IEA

Premature deaths from air pollution will continue to rise to 2040 unless changes are made to the way the world uses and produces energy, the International Energy Agency said. Around 6.5 million deaths globally are attributed each year to poor air quality inside and outside, making it the world's fourth-largest threat to human health, behind high blood pressure, dietary risks and smoking.

Harmful pollutants such as particulate matter - which can contain acids, metals, soil and dust particles - sulfur oxides and nitrogen oxides, are responsible for the most widespread effects of air pollution. Tiny particulate matter can cause lung cancer, strokes and heart disease over the long term, as well as trigger symptoms such as heart attacks that kill more rapidly.

The release of these pollutants is mainly due to the unregulated or inefficient production and use of energy, the IEA said in a special report on energy and air pollution.

Without action, annual premature deaths attributable to outdoor air pollution will increase to 4.5 million in 2040 from around 3 million currently. Premature deaths due to household air pollution however, should fall to 2.9 million from 3.5 million.

Asia will account for almost 90 percent of the rise in deaths. Even though global emissions are forecast to decline overall to 2040, existing and planned energy policies will not be enough to improve air quality, the report said. Harmful greenhouse gas emissions should continue to fall in industrialized countries and recent signs of decline in China should continue, but emissions are set to rise in India, Southeast Asia and Africa as energy demand growth dwarfs efforts to improve air quality.

The IEA said increasing total energy investment by 7 percent, or $4.7 trillion, to 2040 could help ensure premature deaths from outdoor pollution fall to 2.8 million and from household air pollution to 1.3 million.

New energy and air quality policies will also deliver cleaner air. Each country needs to have a credible, long-term air quality goal, the report said. There should be a package of measures for the energy sector such as fitting coal-fired power plants with scrubbers; more use of renewable energy; increased energy efficiency and emissions control, it said.

79. From Green Slime to Jet Fuel: Algae Offers Airlines a Cleaner Future

As airlines struggle to find cleaner ways to power jets and with an industry-wide meeting on CO2 emissions just months away, scientists are busy growing algae in vast open tanks at an Airbus site at Ottobrun, near Munich. The European aerospace group is part-financing the Munich Technical University project to grow algae for biofuel and, although commercial production is a long way off, hopes are high.

Thomas Brueck, Munich TU's associate professor of industrial biocatalysis, says that the biofuel from algaculture could provide 3-5 percent of jet fuel needs by about 2050. Algae can grow 12
times faster than plants cultivated on soil and produces an oil yield about 30 times that of rapeseed.

However, although aviation biofuel made from feedstocks such as flax or used cooking oil is already available, limited stocks and low oil prices mean only a few airlines, including Lufthansa and KLM, are using it on a trial basis.

"To substitute 100 percent of the kerosene use today, we will not do it with algae alone. We need a combination of different technologies to actually enable that substitution," Brueck said.

Airbus also says the technology, in which it and the Bavarian government are investing more than 10 million euros ($11 million) between them, is still at an early stage and is not financially viable for airlines just yet. "But we are sure that over time, we will make it possible to offer kerosene made of algae for a competitive price," an Airbus spokesman said.

80. Nissan to Develop Ethanol-Based Fuel Cell Technology By 2020

Nissan Motor Co said recently it was developing fuel cell vehicle (FCV) technology using ethanol as a hydrogen source in what would be an industry first, and planned to commercialize its system in 2020 as part of efforts to develop cleaner cars.

The Japanese company said using ethanol, produced from crops including sugar cane and corn, to generate hydrogen-based electricity inside vehicles would be cheaper than fuel cell technology developed separately by rivals Toyota Motor Corp, Honda Motor Co, and Hyundai Motor Co.

"The cost and energy required to produce hydrogen can be very high, and it also requires significant investment in (fueling and storing) infrastructure," Nissan Executive Vice President Hideyuki Sakamoto told a media briefing. "Compared with that, ethanol is very easy to procure, it is safer to store and lower cost. These are its merits."

Nissan said its technology would be ready for use in vehicles in 2020, adding it could be used to extend the range of larger, electric vehicles such as delivery vans. It would target a cruising range of around 800 kilometers per fueling, more than the range for gasoline-powered vehicles of just over 600 kilometers.

The automaker said running costs for the FCVs would be roughly similar to those of electric vehicles, while declining to give details on vehicle pricing.

Ethanol is used as a fuel source for vehicles in countries including Brazil, but Nissan is planning to use it to generate electricity in fuel cell stacks to charge batteries which would power vehicle motors.

In developing its FCV technology, Nissan joins Toyota and Honda in a national, government-backed drive to develop a "hydrogen society", in which the zero-emission fuel would be used to power homes and vehicles, and reducing Japan's reliance on imported fuel sources and nuclear power.

Toyota began marketing the Mirai, its hydrogen FCV, in late 2014, while Honda earlier this year began sales of its Clarity Fuel Cell vehicle. Initial production for both models has been limited due to their relatively high cost and limited fueling infrastructure.
Unlike its rivals’ offerings, Nissan's technology does not require hydrogen to be stored in vehicles, reducing the need for expensive bulky hydrogen tanks, and would not require fueling stations, which have been slow to spread globally.

81. Statistical Review Shows World Shifting To Lower-Carbon Fuels

The 65th edition of the BP Statistical Review of World Energy sets out energy data for 2015, revealing a year in which significant long-term trends in both the global demand and supply of energy came to the fore with global energy consumption slowing further and the mix of energy sources shifting towards lower-carbon fuels.

Since its first edition in 1952, the BP Statistical Review has provided timely and objective data to help inform discussion, debate and decision-making in matters regarding energy. Its annual data helps the industry to better interpret market swings and fluctuations, and the historical data provides important context for gauging where energy markets may be heading next.

Speaking at the launch, BP Group Chief Executive Bob Dudley said: “As this edition of the Stats Review clearly demonstrates, the world of energy is again going through a period of profound change. But this is nothing new for our industry; over the past 65 years the Review has revealed continual change in the global energy landscape. Our task as an industry is to take the steps necessary to ensure our resilience in the near term, while continuing to invest to meet the energy needs of the future.”

The Review shows that in 2015 global demand for primary energy grew by only 1%, significantly slower than the 10-year average. This reflected continued weakness in the global economy and lower growth in Chinese energy consumption as the country shifts from an industrial to a service-driven economy.

On the supply side, technological advances have increased the range and availability of different fuels. The US shale revolution has unlocked huge swathes of oil and gas resources, and rapid technology gains have supported strong growth in renewable energy. Natural gas and oil also recorded solid growth in 2015, while global demand for coal saw its largest fall on record.

Prices for all fossil fuel energy fell last year, prompting adjustments in the energy markets; boosting demand in some markets – most notably oil which gained market share for the first time since 1999 – and curtailing supply and shifting the fuel mix in others.

Sluggish demand growth together with the shift in the energy mix away from coal meant that the growth in carbon emissions from energy consumption stalled in 2015. This encouraging development represented the slowest growth in emissions in nearly a quarter of a century (aside from immediately following the financial crisis).

Review highlights – energy developments:

- Global primary energy consumption increased by just 1% in 2015, similar to growth in 2014 (+1.1%), but much slower than the 10-year average of 1.9% a year.
- Oil remained the world’s leading fuel, accounting for 32.9% of global energy consumption, and gaining market share for the first time since 1999.
- Coal remained the second largest fuel by market share (29.2%), but was the only fuel that lost global market share in 2015.
• Natural gas market share of primary energy consumption was 23.8%.
• Energy consumption growth was below the 10-year average for all regions except Europe and Eurasia.
• Although emerging economies continued to dominate the growth in global energy consumption, growth in these countries in 2015 (at 1.6%) was again well below its 10-year average rate. Emerging economies now account for 58.1% of global energy consumption.
• Energy consumption in China grew 1.5% in 2015, the slowest rate in almost 20 years. Despite this, China remained the world’s largest growth market for energy for a fifteenth consecutive year.
• Prices for all fossil fuels fell in 2015. Crude oil prices recorded the largest annual decline on record in dollar terms, and the largest percentage decline since 1986.

Oil Prices

• Dated Brent averaged $52.39 per barrel in 2015, a decline of $46.56 per barrel from the 2014 level and the lowest annual average since 2004.
• Crude oil prices rose in early 2015 as global consumption rebounded and US production began to register month-on-month declines. But strong growth in OPEC production, particularly in Iraq and Saudi Arabia, caused prices to fall sharply later in the year.
• The average WTI–Brent differential narrowed for the third consecutive year, to $3.68 per barrel.

Consumption and production

• Global oil consumption grew by 1.9 million barrels per day (bpd), or 1.9% – nearly double the recent historical average (+1%) and significantly stronger than the increase of 1.1 million bpd seen in 2014.
• The relative strength of consumption was driven by the OECD countries, where consumption increased by 510,000 bpd (+1.1%), compared with an average decline of 1.1% over the past decade.
• Growth was well above recent historical averages in the US (+1.6%, or 290,000 bpd) and the EU (+1.5%, or 200,000 bpd), while Japan (-3.9%, or -160,000 bpd) recorded the largest decline in oil consumption.
• Outside the OECD, net oil importing countries also recorded significant increases: China (+6.3%, or 770,000 bpd) once again accounted for the largest increment to demand, while India (+8.1%, or 310,000 bpd) passed Japan as the world’s third-largest oil consumer. But this growth was offset by weaker growth in oil producers, so that oil demand in non-OECD as a whole (+2.6%, or 1.4 million bpd) was below its recent historical average.
• Global oil production increased even more rapidly than consumption for a second consecutive year, rising by 2.8 million bpd or 3.2%, the strongest growth since 2004.
• Production in Iraq (+750,000 bpd) and Saudi Arabia (+510,000) rose to record levels, driving OPEC production up by 1.6 million bpd to 38.2 million bpd, exceeding the previous record reached in 2012.
• Production outside OPEC slowed from last year’s record growth but still grew by 1.3 million bpd. The US (+1 million bpd) had the world’s largest annual growth increment and remained the world’s largest oil producer. Elsewhere, production growth in Brazil (+180,000 bpd), Russia (+140,000 bpd), the UK and Canada (+110,000 bpd each) was partly offset by declines in Mexico (-200,000 bpd), Yemen (-100,000 bpd) and elsewhere.

Refining and trade
- Global crude runs rose by 1.8 million bpd (+2.3%) in 2015 – more than triple the 10-year average growth despite declines in South and Central America, Africa and Russia.

- Strong refining margins lifted crude runs by 1 million bpd in the OECD, with growth in Europe (+740,000 bpd) the highest since 1986.

- Global refining capacity grew by only 450,000 bpd, the smallest increase in 23 years. Delayed expansion in China, combined with closures in Taiwan and Australia, resulted in a fall in Asian capacity for the first time since 1988.

- Global refinery utilization rose by 1 percentage point to 82.1%, the fastest increase in 5 years.

- Global trade of crude oil and refined products in 2015 expanded by 3 million bpd (+5.2%), the largest increase since 1993.

- Crude oil trade was lifted by growing exports from the Middle East (+550,000 bpd), while Europe and China accounted for the largest increases in imports (+770,000 and +530,000 bpd respectively).

- Growth in refined products exports was again led by the US (+470,000 bpd); the country’s net oil imports fell to 4.8 million bpd, the lowest since 1985.

Natural gas Consumption and production

- World natural gas consumption grew by 1.7%, a significant acceleration from the very weak growth (+0.6%) seen in 2014 but still below the 10-year average of 2.3%. Growth was below average outside the OECD (+1.9%, accounting for 53.5% of global consumption) but above average in the OECD countries (+1.5%).

- Among emerging economies, Iran (+6.2%) and China (+4.7%) recorded the largest increases in consumption, even though growth in China was weak compared with its 10-year average growth of 15.1%. Russia (-5%) recorded the largest incremental decline, followed by Ukraine (-21.8%).

- Among OECD countries, the US (+3%) accounted for the largest growth increment, while EU consumption (+4.6%) rebounded after a large decline in 2014.

- Globally natural gas accounted for 23.8% of primary energy consumption.

- Global natural gas production grew by 2.2%, more rapidly than consumption but below its 10-year average of 2.4%. Growth was above average in North America, Africa, and Asia Pacific. The US (+5.4%) recorded the largest growth increment, with significant increases also in Iran (+5.7%) and Norway (+7.7%). EU production fell sharply (-8%), with the Netherlands (-22.8%) recording the world’s largest decline. Large volumetric declines were also seen in Russia (-1.5%) and Yemen (-71.5%).

Trade

- Global natural gas trade rebounded in 2015, rising 3.3%.

- Pipeline shipments increased by 4%, driven by growth in net pipeline exports from Russia (+7.7%) and Norway (+7%). The largest volumetric increases in net pipeline imports were in Mexico (+44.9%) and France (+28.8%).

- Global LNG trade increased by 1.8%. Export growth was led by Australia (+25.3%) and Papua New Guinea (+104.8%), offsetting declines in shipments from Yemen (-77.2%). Higher net LNG imports for Europe (+15.9%) and rising Middle Eastern imports (+93.8%) were partly offset by declines in net imports in South Korea (-10.4%) and Japan (-4%).

- International natural gas trade accounted for 30.1% of global consumption; pipeline share of global gas trade rose to 67.5%.
Other fuels Coal

- Global coal consumption fell by 1.8% in 2015, well below the 10-year average annual growth of 2.1% and the largest percentage (and volumetric) decline in our data set. Coal’s share of global primary energy consumption fell to 29.2%, the lowest share since 2005.
- The net decline in coal consumption was entirely accounted for by the US (-12.7%, the world’s largest volumetric decline) and China (-1.5%), with more modest increases registered in India (+4.8%) and Indonesia (+15%).
- Global coal production fell by 4%, with large declines in the US (-10.4%), Indonesia (-14.4%), and China (-2%).

Nuclear and hydroelectric

- Global nuclear output grew by 1.3%, with China (+28.9%) accounting for all the net increase. China passed South Korea to become the fourth largest supplier of nuclear power, while EU output (-2.2%) fell to the lowest level since 1992.
- Nuclear power accounted for 4.4% of global primary energy consumption.
- Global hydroelectric output grew by a below average 1%. Hydroelectric output accounted for 6.8% of global primary energy consumption.
- China recorded the largest increment of hydroelectric output growth (+5%) and remains by far the world’s largest producer of hydroelectricity.

Renewables (including wind, solar, and biofuels)

- Renewable energy in power generation continued to increase in 2015, reaching 2.8% of global energy consumption, up from 0.8% a decade ago.
- Renewable energy used in power generation grew by 15.2% (or 213 Terra-watt hours), an increment which was roughly equal to all of the increase in global power generation. Renewables accounted for 6.7% of global power generation, up from 2.0% a decade ago.
- China (+20.9%) and Germany (+23.5%) recorded the largest increments in renewables in power generation.
- Globally, wind energy (+17.4%) remains the largest source of renewable electricity (52.2% of renewable generation), with Germany (+53.4%) recording the largest growth increment.
- Solar power generation grew by 32.6% with China overtaking both Germany and the US to become the world’s leading generator of solar energy.
- Global biofuels production grew by 0.9%, well below the 10-year average of 14.3%.

Carbon emissions

- Emissions of CO2 from energy consumption globally increased by just 0.1% in 2015. Other than the recession of 2009, this represented the lowest growth rate since 1992. The drop was driven by slower energy consumption growth, as well as a shift in the fuels mix.
- Regionally, emissions growth was below average in every region except Europe and Eurasia.

82. Christiana Figueres Rumored to Seek UN's Top Job

Christiana Figueres, the outgoing executive secretary of the United Nations Framework Convention on Climate Change and one of the driving forces behind last year’s Paris Agreement,
will add her name to the list of candidates to replace UN Secretary General Ban Ki-moon, multiple UN sources and other observers told the press.

Figueres, who will step down July 7 after six years as the UN's top climate change official, lacks the typical background in security, peacekeeping and development that many candidates for the secretary general job have.

Environmental advocates and other key observers said that Figueres' candidacy, whether successful or not, could further raise the profile of climate change within the UN. “Figueres' credentials would mean all the candidates would be asked for their views on climate change,” said a senior European Union climate negotiator, asking not to be further identified.

About a dozen candidates have said they would like to succeed Ban, though not all the names have been released. The selection is expected by October, following discussions in the UN General Assembly and approval from the five members of the UN Security Council.

83. UN Agency: Hottest Northern Hemisphere Spring Ever

The Northern Hemisphere's spring was the hottest ever recorded, and May continued a streak of eight consecutive months of unprecedented global warmth, according to data released June 14 from the World Meteorological Organization (WMO) and the NASA Goddard Institute for Space Studies.

The hottest worldwide temperatures ever for the month of May were recorded last month, according to data released June 14.

The last eight months have seen record high temperatures due to the combination of rising greenhouse gas emissions levels with the strongest El Nino weather event since the 1997–1998 edition of the Pacific Ocean phenomenon, the agencies said.

But May was the hottest yet compared to historical averages, and the three Northern Hemisphere spring months—March, April and May—had the highest average temperatures ever recorded for that period of the year. For May alone and for the three-month period, the average temperature worldwide was 1.3 to 1.5 degrees Celsius (2.3 to 2.7 degrees Fahrenheit) above average.

The temperature rise was especially notable in some parts of the world. For instance, in Australia (where it was autumn), the average temperature for the three months was 1.86 degrees Celsius (3.3 degrees Fahrenheit) above average. In Finland, temperatures were 3 to 5 degrees Celsius (5.4 to 9 degrees Fahrenheit) above average.

“The state of the climate so far this year gives us much cause for alarm,” David Carlson, director of the World Climate Research Program, said in a statement. “Exceptionally high temperatures. Ice melt rates between March and May that we don't normally see until July. Once-in-a-generation rainfall events. The super El Nino is only partly to blame. Abnormal is the new normal.”

Though the 1997–1998 El Nino was stronger than the 2015–2016 version, now dissipating, the former event took place while global greenhouse gas emissions were around 25 percent lower than current levels, said WMO, a United Nations specialized agency. This year is on pace to be the first in which average greenhouse gas concentrations will remain above the 400-parts-per-million threshold all year long.
With the higher temperatures come more frequent and stronger extreme weather events, scientists say. Among those recorded in May are record low levels of sea ice, record low snowfall in the Northern Hemisphere, three months of rainfall in less than a month in France, floods in Texas, and new highs of bleaching of coral reefs around Australia.

84. Scientists Observe First Signs of Healing In the Antarctic Ozone Layer

Scientists at MIT and elsewhere have identified the "first fingerprints of healing" of the Antarctic ozone layer. The team found that the September ozone hole has shrunk by more than 4 million square kilometers -- about half the area of the contiguous United States -- since 2000, when ozone depletion was at its peak. The team also showed for the first time that this recovery has slowed somewhat at times, due to the effects of volcanic eruptions from year to year. Overall, however, the ozone hole appears to be on a healing path.

The authors used "fingerprints" of the ozone changes with season and altitude to attribute the ozone's recovery to the continuing decline of atmospheric chlorine originating from chlorofluorocarbons (CFCs). These chemical compounds were once emitted by dry cleaning processes, old refrigerators, and aerosols such as hairspray. In 1987, virtually every country in the world signed on to the Montreal Protocol in a concerted effort to ban the use of CFCs and repair the ozone hole.

"We can now be confident that the things we've done have put the planet on a path to heal," says lead author Susan Solomon, the Ellen Swallow Richards Professor of Atmospheric Chemistry and Climate Science at MIT. "Which is pretty good for us, isn't it? Aren't we amazing humans, that we did something that created a situation that we decided collectively, as a world, 'Let's get rid of these molecules'? We got rid of them, and now we're seeing the planet respond."