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EUROPE

1. EU Reaches Agreement to Strengthen Vehicle Type Approval System

The European Parliament, the Council and the Commission reached a political agreement to strengthen the EU vehicle type approval framework by introducing elements of European oversight and requirements for checking on manufacturers’ ongoing compliance with emission regulations. The action follows the proposal from January 2016.

Commissioner Elżbieta Bieńkowska, responsible for Internal Market, Industry, Entrepreneurship and SMEs, said: “Dieselgate has revealed the weaknesses of our regulatory and market surveillance system. We know that some car manufacturers were cheating, and many others were exploiting loopholes. To put an end to this, we are overhauling the whole system. After almost two years of negotiations, I welcome that the key elements of our proposal have been upheld, including real EU oversight and enforcement powers. In the future, the Commission will be able to carry out checks on cars, trigger EU-wide recalls, and impose fines of up to €30,000 per car when the law is broken.”

The main building blocks of the new rules are:

- Strengthened quality and independence of type-approval and testing before a car is placed on the market:
  - Technical services will be regularly and independently audited to obtain and maintain their designation by a member state for testing and inspecting new car models. The Commission and other member states will be able to challenge a designation.
  - National type-approval authorities will be subject to Commission audits.
  - However, the Commission’s proposal to modify the remuneration system to avoid that technical services are paid directly by the manufacturer was not maintained.

- Increase checks of cars that are already on the EU market:
  - While the current type-approval rules deal mainly with ex ante controls of prototypes taken from the production line, in the future member states will have to carry out regular spot-checks on vehicles already on their roads, at a rate of at least one for every 40,000 newly-registered vehicles (with a minimum of five tests per member state). 20% of these tests will be on emissions. The test results will be made publicly available.
  - All member states will now be able to immediately take safeguard measures against non-compliant vehicles on their territory without having to wait for the authority that issued the type-approval to act, as is currently the case.

- European oversight:
  - In the future, the Commission will carry out market checks independently from member states and will have the possibility to initiate EU-wide recalls. It will have the power to challenge the designation of technical services, and to impose administrative penalties on manufacturers or technical services of up to €30,000 per non-compliant car.
The Commission will lead a new enforcement forum to ensure a more uniform interpretation of relevant EU legislation, complete transparency on cases of non-compliance, and better and more coordinated market surveillance activities by member states.

The new Regulation maintains the current ban on defeat devices, but goes a step further—in the future, car manufacturers will have to provide access to the car’s software protocols.

The preliminary political agreement is now subject to formal approval by the European Parliament and Council. The Regulation will then be directly applicable in all member states and will become mandatory on 1 September 2020.

Under current rules, the EU sets the vehicle emission standards, but the enforcement of emission compliance is entirely delegated to national authorities. Once a car is certified in one member state, it can circulate freely throughout the EU. Only the national authority that type approved a car can take remedial action such as ordering a recall. In the European practice, once a vehicle model has been granted a type approval, it is normally never checked for ongoing compliance. EU type approvals are valid for many years, provided there are no changes to the vehicle model, and do not require annual renewals.

The agreement was welcomed by both the auto industry and by public policy groups.

The Type-Approval Regulation complements other important regulatory changes, including the Real Driving Emissions (RDE) testing requirements that became effective from September 2017.

2. Denmark To Expose Rule Breaking Shipping Firms

Shipping companies that generate air pollution by not complying with sulfur fuel targets will be publicly ‘named and shamed’ under new Danish government plans to deter ships from breaking environmental rules in the country’s waters. Environment and food minister Esben Lunde Larsen has asked the Danish Environmental Protection Agency (EPA) to prepare a bill for submission to bring forward the plans.

Atmospheric pollution from the burning of high-sulfur fuel has been linked to health issues such as respiratory disease and is harmful to the environment, according to the Danish government.

The Danish government made moves to tackle the problem in 2015 by sharpening sulfur requirements from ships and prohibiting the use of ships carrying fuel oils exceeding 0.10% sulfur unless the vessel uses purification technology.

Since 2015, the Danish EPA has reported 21 companies for the violation of ship-polluting rules, and seven of these have been fined this year, according to the Danish environment ministry. Three of them have paid a fine of between 30,000 (€4,000) and 375,000 kroner.

According to the Danish government, since this law was introduced in 2015, the amount of sulfur in the air in Denmark has more than halved.

Larsen said he welcomed the sharpening of sulfur requirements that have led to cleaner air “because most ships comply with the rules”.
He added: “Therefore, it must be possible to publish the names of the offending shipping companies, so that as a customer it is possible to opt out of shipping companies that do not comply with the rules. It can hopefully have a deterrent effect on the few shipping companies that violate the rules.”

Maritime transport emits around 1,000 million tons of CO2 annually worldwide and is responsible for around 2.5% of global greenhouse gas emissions. Shipping emissions are predicted to increase between 50% and 250% by 2050, depending on future economic and energy developments, according to the Commission.

The Commission’s 2011 White Paper on transport suggests that the EU’s CO2 emissions from maritime transport should be cut by at least 40% from 2005 levels by 2050, and if feasible by 50%. However, international shipping is not covered by the EU’s current emissions reduction targets. The EU and its member states favor a global approach led by the International Maritime Organization (IMO) to reduce GHG from international shipping.

The IMO has stipulated that the maximum permitted sulfur content for fuel oil will be cut from 3.5% to 0.5% from January 2020.

3. 2 Million VW Cars ‘Still Non-Compliant’

German car giant Volkswagen has failed to deliver on a pledge to recall 8.5 million vehicles and bring them into full conformity with EU type-approval rules in the wake of the dieselsgate emissions scandal, the European Commission has confirmed. “While Volkswagen did not deliver on its engagement to have all cars repaired by autumn 2017 – with more than 25% of the affected cars concerned still not compliant – it expects to receive an updated plan on further measures and enticement of the owners to have the fix executed as soon as possible,” the EU executive said in answer to a written question from the MEP Kathleen Van Brempt.

The Commission also said it is currently analyzing responses from Germany, Spain, Luxembourg and the United Kingdom, against which it launched infringement proceedings in December 2016 over their issuing of type-approvals for the affected vehicles.

Van Brempt – who chaired a European Parliament inquiry into the dieselsgate scandal – called for governments to “act decisively” to have the remaining affected cars taken out of circulation.

“Two years after the dieselsgate scandal, there are still too many cars on the roads that do not respect the technical rules on car emissions and therefore, represent a threat to the health of our citizens. The Commission and member states must take this problem much more seriously,” the Belgian Social Democrat said.

The Commission noted that the relevant authorities in the four countries named in its statement “have approved the approach and fix as proposed by Volkswagen”. The car maker's EU office said it was unable to respond to a request for comment in time for publication.

4. Germany’s Top Court Rejects Volkswagen’s Bid to Suspend Emissions Audit

Germany's highest court has rejected a bid by Volkswagen AG to suspend the work of a special auditor appointed to investigate management's actions in the "Dieselsgate" emissions scandal. A three-judge panel did not give an opinion on the merits of the case, in which VW argues that the
naming of the auditor by a lower court violated its fundamental rights but did dismiss the firm's request for an injunction.

"The constitutional complaint that has been filed is neither a priori inadmissible nor is it obviously ungrounded," the Constitutional Court panel said in the five-page ruling, dated December 20th. It added, however, that VW had not "convincingly made the case for an immediate decision".

A regional court appointed the auditor in November, in a victory for shareholder groups that want to establish whether VW bosses withheld market-moving information about the manipulation of vehicle-emissions tests. The court in the town of Celle ruled that VW could not appeal against its decision. The auto maker views the appointment of the auditor as a violation of its fundamental rights, a company spokesman said.

Shortly after the Dieselgate scandal broke, VW hired U.S. law firm Jones Day and advisory firm Deloitte to investigate the circumstances of its wrongdoing and who was responsible. Although VW had pledged to improve transparency, it never published the findings that were used as the basis for a $4.3-billion settlement with the U.S. Justice Department.

Investor groups seeking billions in damages from VW are trying to establish when VW's executive management board first became aware of cheating in the emissions tests and whether it disclosed possible financial damage to investors promptly. German securities law requires companies to publish any market sensitive news in a timely fashion. The matter is also being investigated by German prosecutors.

VW has said it believes its management complied with obligations under German disclosure rules. The spokesman referred to the Jones Day investigation, as well as a statement of facts published by the U.S. authorities in which VW admitted manipulating the emissions tests.

5. Three German Automakers Take Heat Over Diesel Exhaust Tests on Monkeys

Public criticism of the German auto industry has escalated after a report that an industry-sponsored entity commissioned a study of the effects of diesel exhaust using monkeys, while another study exposed humans to low levels of one type of air pollutant.

The German government condemned the experiments and Volkswagen sought to distance itself from them, with its chairman saying that “in the name of the whole board I emphatically disavow such practices.”

The tests were reportedly commissioned by a research group funded by major German auto companies, BMW, VW and Daimler AG. The companies distanced themselves from the research, which they reportedly funded but say they did not oversee.

- Volkswagen Chairman Hans Dieter Poetsch said the tests must be “investigated completely and without reservation,” the dpa news agency reported.
- Daimler AG said it was “appalled by the nature and extent of the studies” and said that, although it didn’t have any influence on the studies’ design, “we have launched a comprehensive investigation into the matter.”
- BMW said that it “did not participate in the mentioned study” on animals “and distances itself from this study.” It said it was investigating the work and background of the research group.
Revelations of the tests add a twist to the German auto industry’s attempt to move past Volkswagen’s scandal over cheating on diesel tests and the resulting questioning of diesel technology across the industry.

A report by The New York Times found that the research group financed by top German car manufacturers commissioned experiments in which one group of monkeys was exposed to diesel exhaust from a late-model Volkswagen, while another group was exposed to fumes from an older Ford pickup.

The experiments were carried out in 2014 before Volkswagen was caught using software that let vehicles cheat on emissions tests. They were intended to show modern diesel technology had solved the problem of excess emissions, but according to the Times report, the Volkswagen car in the tests was equipped with illegal software that turned emissions controls on while the car was on test stands and off during regular driving.

Volkswagen admitted using the software in 2015. The Volkswagen scandal led to public scrutiny of diesel emissions as regulators discovered that other companies’ vehicles also had higher emissions on the road than during testing, although not necessarily through illegal rigging. The industry has had to fend off calls for diesel bans in German cities with high pollution levels.

The Times report said the group that commissioned the studies, known as EUGT, got all its funding from the three automakers.

Volkswagen has suspended an executive who knew about the tests but did not inform higher-ups. The German automaker said in a statement that Dr. Thomas Steg, head of Group External Relations and Sustainability, was suspended after he recommended the move to the board. Steg will remain suspended until the investigation into the incident is complete.

"We are currently in the process of investigating the work of the EUGT, which was dissolved in 2017, and drawing all the necessary consequences," VW CEO Matthias Muller said in the statement.

"Mr. Steg has declared that he will assume full responsibility. I respect his decision."

The Associated Press reports that diluted diesel exhaust from an older Volkswagen was fed into chambers that were holding the monkeys for four hours. The monkeys were sedated and had lung fluid samples drawn, but A.P. notes the animals were not killed and the study didn't even produce a true result.

"The investigations of these matters are being pursued intensively," VW said in the January 30 statement. "The duties of Mr. Steg will be assumed on an acting basis by Jens Hanefeld, who is responsible for International and European Policy."

The Volkswagen used in the tests at the Lovelace Respiratory Research Institute in New Mexico was equipped with the software the automaker used to illegally pass emission tests.

A.P. reports that the Lovelace Respiratory Research Institute claims that they were not aware the VW used in the test had been equipped with the defeat device. They claim the tests were designed by the EUGT, and that the tests met regulations for the treatment of test animals.
"We understood that the EUGT organization was financially supported by automobile manufacturers, but we believed the goal of the study was to advance the scientific understanding of the effects of diesel fumes on our lungs, including the effects of new vehicle technologies that are designed to produce less pollution," Lovelace institute CEO Robert W. Rubin said in a statement.

Rubin added that once researchers at the lab found out the VW was equipped to produce less pollution, that the tests were compromised.

The Times report was followed by one in the Stuttgarter Zeitung daily that the now-closed research group also commissioned tests in which humans were exposed to nitrogen dioxide, which belongs to a class of pollutants known as nitrogen oxides. The group reportedly said the tests showed no effect on the subjects.

The human study, carried out by Aachen University, involved studying the effects of exposing 25 subjects, mostly students, to low levels of nitrogen dioxide like those that could be found in the environment – from a 40-liter bottle, not a diesel engine. The individuals gave informed written consent for the study, which was approved by the ethics committee of the university's medical faculty, according to the study. The university said the study had no relation to the diesel scandal.

6. Transport Commissioner in Warning Over Adblue Emulators

The West of England Traffic Commissioner, Kevin Rooney, has warned commercial transport operators that they face enforcement action if they use devices designed to cheat emissions control systems. The warning comes after a business had been found to have been using an AdBlue emulator in one of its vehicles, which the Transport Commissioner described as being equal to "using a magnet to interrupt a tachograph".

AdBlue is a fluid that is injected into diesel exhaust gases and which at high temperatures turns to ammonia and carbon dioxide, which helps to convert NOx into nitrogen and water. Vehicles in frequent use can require the fluid, which is contained in a tank adjacent to the diesel fuel tank, to be topped up regularly.

The regulator's comments follow the conclusion of a public inquiry where a haulage operator's transport manager admitted researching the fitting of a defeat device to circumvent the AdBlue system. Mr. Rooney told the CPC holder, Patrick McNally, he had a duty to take expert legal advice or contact the Driver and Vehicle Standards Agency (DVSA) before interfering with vehicle systems.

Because of his actions, Mr. McNally was disqualified from acting as a transport manager for 12 months. The operator, Louis McNally, will be suspended from running vehicles for 14 days from 23:59 on 11 February 2018.

In a second case, Mr. Rooney made an order to revoke a six-vehicle license held by Stephen Harris and Karen Phelps, after rejecting Mr. Harris’s claim that he didn’t know one of his vehicles was fitted with an emulation device.

“The operator had purchased a vehicle so that it could go in to London without attracting a penalty charge and so was Euro VI compliant,” the Traffic Commissioner remarked in a written decision. “It had a tank next to the fuel tank for AdBlue. It had an AdBlue gauge on the dash that never
moved. Mr. Harris didn’t notice that his AdBlue truck never needed AdBlue. That is clear nonsense. “I find that Mr. Harris willfully shut his eyes the absolutely blindingly obvious.”

The regulator said the fitting of the emulator device returned the vehicle’s NOx emissions to Euro III standard and would have increased the vehicle’s emissions by two and a half times at the worst.

“NOx emissions have a greater effect in densely populated environments. That is why only vehicles of Euro IV and above are allowed in to London. Mr. Harris initially denied that the vehicle had been in to London but later, when put under threat of analysis, accepted that it had been.

“With the emulator fitted and operating at Euro III levels, the operator should have paid a pollution charge of £200 per visit to the capital.”

Ordering the revocation of the partnership’s license from 23:59 on 3 March, Mr. Rooney also criticized their “persistent use” of vehicles in an immediately dangerous condition. A total of 12 prohibitions for defects had been issued to the operator’s vehicles in three years, while the MOT failure rate was 43% over the life of the license, more than double the national average.

The business has indicated its intention to appeal the Traffic Commissioner’s decision to the Upper Tribunal.

7. European Truck Emissions Monitoring Plan Clears Committee

DAF Trucks N.V., MAN S.E., Scania A.B., and other truck manufacturers would have to report the carbon dioxide emissions and fuel consumption of their new vehicles under a draft European Union regulation approved by the European Parliament’s environment committee January 24.

The carbon dioxide emissions of heavy vehicles, including trucks and buses, are currently not systematically monitored in the EU. The draft regulation, published in May 2017 by the European Commission, the EU’s executive arm, is intended as a first step ahead of an emissions standard for trucks, similar to that which has been in place in the U.S. since 2011. The commission has said the emission standard will be proposed this year.

Though trucks only account for 5 percent of vehicles on EU roads, they generate 25 percent of the greenhouse gas emissions from transportation, environmental group Transport & Environment said in a January 24 statement. Making emissions and fuel economy data publicly available would let fleet operators make informed decisions and could save as much as 32,000 euros ($39,692) on fuel per truck annually, the group said.

Under the draft regulation, manufacturers would be required to calculate their vehicles’ carbon dioxide emissions using standard software and report the results to authorities. Vehicle emissions and fuel economy data would be published.

Truck manufacturers broadly favored the draft regulation, which would “enable the knowledge gap on CO2 emissions from heavy-duty vehicles to be closed,” Cara McLaughlin, spokeswoman for the European Automobile Manufacturers’ Association, told reporters. However, the European Parliament environment committee amended the draft regulation to require the collection of additional information, such as air drag performance and other engine information that is confidential and sensitive, McLaughlin said.
“Making such data publicly available to competitors will severely hurt the competitiveness of the European truck industry, in Europe and abroad,” McLaughlin added.

Measuring carbon dioxide emissions from trucks was more difficult than measuring emissions from cars because of “all the different transport tasks performed by the trucks,” Hans-Ake Danielsson, spokesman for Sweden’s Scania, told the press. Scania trucks already measure fuel consumption in real time, he added.

The draft regulation must be finalized by the European Parliament in negotiations with the Council of the EU, which represents the governments of member countries. The council has not yet taken a position on the draft regulation.

8. PSA Will Electrify Global Product Lineup By 2025

PSA Group plans to bring electrified options to its full car and light-truck lineup by 2025, joining other automakers in pledging to widely deploy partial or fully electric powertrains to lower emissions, said CEO Carlos Tavares. PSA will offer 40 electrified models across its five brands -- Peugeot, Citroen, Opel, Vauxhall and DS -- worldwide by 2025, Tavares said.

"We want to become the most efficient carmaker ... not the largest," Tavares told the Automotive News World Congress,

Overall, PSA, which is preparing to return to the U.S., will launch 124 new models across six regions worldwide over six years, Tavares said. He declined to detail which brand PSA plans to market in the U.S. but said many future Opel models will be engineered to be compliant with U.S. regulations.

PSA acquired Opel and Vauxhall from General Motors in 2017.

The first vehicle destined for the U.S. market is being developed in Europe by a team of U.S. engineers, he said. But he reiterated that PSA plans a phased entry into the U.S., beginning with mobility services and gathering data on American consumer preferences before it starts selling vehicles.

Tavares said 80 percent of the company's vehicles will have the capability to navigate themselves under limited conditions by 2030, and 10 percent will have up to Level 4 and Level 5 autonomy.

PSA is “confident” it can turnaround GM’s former European operations, Tavares said, adding PSA plans to execute a similar strategy to restore profits at Opel as it did with PSA in recent years.

“The numbers I see by Opel and the numbers we were seeing from outside demonstrate that the Opel situation is very similar, if not the same, as the PSA situation back in 2013,” Tavares said. “Opel is PSA 2013.”

A vocal supporter of agility vs. size, Tavares considers being able to quickly adapt the main reason for success in a global automotive landscape where chaos is the norm. In his vision, speed is key in a rapidly changing industry, so Darwinism is back.

Tavares, 59, who has headed PSA since December 2012 and quickly turned around the automaker from a near-death experience -- producing a 7.4 percent operating profit margin in the first half of 2017 -- admitted that size gives just two advantages.
The first is bigger purchasing power in dealing with suppliers. The second is higher volume on which to amortize product and technology investment.

But size alone does not guarantee future success, because bigger organizations are slower to react and tend to become complacent. “The speed we need to adapt to is not chosen by us, but it is imposed by regulators and by changing consumer behaviors,” he said.

In March 2017, PSA announced plans to acquire GM's unprofitable European operations, the Opel and Vauxhall brands, for $2.6 billion. “Turning Opel around is my priority No.1,” Tavares told Automotive News.

Despite PSA’s engineers disputing the notion that German cars are better than Citroens, Peugeots and the near-premium brand DS, Tavares admits that there are consumers around the world that won’t buy a French car, preferring a German volume brand because they see it benefiting from the reverberation of the cachet of German premium brands. "Opel is a German brand, its models will continue to be designed and engineered by German engineers, thus it perfectly fits our French brand portfolio," he said.

PSA’s current main weakness is not being in the North American market, and Tavares is hatching a 10-year plan announced in 2016 and will be completed by 2026 -- when it expects to be selling cars in the U.S. “I was selling cars in the U.S. years ago and it was fun,” Tavares said remembering his years as head of Nissan North American operations.

PSA started to offer mobility services in the U.S. last year and this year will launch car sharing in two to three big cities using vehicles from other automakers.

“A 10-year plan gives us the appropriate time to properly understand this crucial market and launch the right products and services,” he said.

By the time PSA relaunches U.S. sales, it also wants new innovative distribution models in place. While Tavares declined to say which brand PSA will use to re-enter the U.S., he said that a pickup is not on top of his priority list.

**9. In Norway, Electric and Hybrid Cars Outsell Conventional Models**

Sales of electric and hybrid cars in Norway outpaced those running on fossil fuels last year, cementing the country’s position as a global leader in the push to restrict vehicle emissions. The country offers generous incentives that make electric cars cheaper to buy and provides additional benefits once the vehicles are on the road.

Countries around the world have ramped up their promotion of hybrid and electric cars. As China tries to improve air quality and dominate new vehicle technology, the government there wants one in five cars sold to run on alternative fuels by 2025. France and Britain plan to end the sale of gasoline- and diesel-powered cars by 2040.

Norway is ahead of the rest of the world. About 52 percent of the new cars sold in the country last year ran on new forms of fuel, according the data released recently by Norway’s Road Traffic Advisory Board, OFV. The share of diesel cars, which were once considered more environmentally friendly but are now in the spotlight for their noxious emissions, fell sharply.
Although electric vehicles make up a just small portion of the global market now, automakers — including those, like Tesla, that produce only electric models, and giants like Volkswagen — have bet billions of dollars that such vehicles will soon be as cheap and ubiquitous as conventional cars. Investments in charging stations and other technology connected to electric vehicles are also increasing.

General Motors and Ford Motor have said they will shift their focus to electric models, while carmakers like Volvo have moved to phase out the internal combustion engine entirely.

Norway’s embrace of electric cars has been hastened by hefty government subsidies and tax breaks that make the technology more affordable. The authorities have expanded the nationwide network of charging stations. They also offer electric car drivers a bevy of other benefits: cheaper parking, the use of bus lanes for car-poolers during rush hours, and exemptions from the vast majority of road tolls.

Charging stations are relatively easy to find in major cities.

**10. Hybrids Propel Surge in Europe Alternative-Fuel Auto Sales**

European sales of cars powered by alternative energy sources rose 39 percent last year as Toyota Motor Corp. pushed hybrid models and Renault SA extended the driving range on the latest version of its all-electric Zoe.

Customers bought 953,355 autos that run on systems including batteries, electric-gasoline or -diesel motors, fuel cells or natural gas in 2017, the Brussels-based European Automobile Manufacturers’ Association, or ACEA, said February 1 in a statement.

**Growing Electrification**

Fully battery-powered and hybrid electric-combustion auto sales jumped last year

![Bar Graph](Bloomberg)

Combined demand for full hybrid cars, which can operate on either conventional fuel or self-charged battery power, and so-called mild hybrids, which use an electric motor to help the combustion engine run more efficiently, surged 52 percent. Sales of all-electric models jumped 49 percent.
The growth far outpaced the European car market’s 3.3 percent gain last year, suggesting consumers are warming to the models added by Toyota, Renault and competitors. Still, the alternative systems powered only 6.1 percent of the 15.6 million autos sold across the region last year, an increase from 4.5 percent in 2016. Battery-powered cars had a 0.9 percent market share in 2017.

Still Small
Non-conventional powering systems account for less than 10% of Europe's car market

Note: Rechargeable models include battery, plug-in hybrid and fuel-cell vehicles
Source: European Automobile Manufacturers’ Association

European Union regulators are requiring the auto industry to reduce carbon-dioxide emissions from vehicle exhausts to limit greenhouse gases. Countries including Germany, the region’s largest auto market, and Norway have policies in place to encourage purchases of battery-powered or hybrid models. Still, customers have been reluctant to buy all-electric autos because of concerns about how long battery recharging takes and the short distances the cars can travel compared with gasoline or diesel models.

Demand Jolt
Germany beat France last year as Europe's No. 2 market for all-electric cars

Source: European Automobile Manufacturers’ Association

Bloomberg
Renault improved the Zoe’s range on a full charge by 67 percent to 400 kilometers (250 miles). Competitors’ all-electric models going on sale this year an auto from BMW AG’s Mini city-car division and a sport utility vehicle from Volkswagen AG’s luxury Audi nameplate.

Toyota has up to now focused on hybrid technology, and it said in January that sales of the models jumped 38 percent in Europe last year to account for 41 percent of its deliveries there. Daimler AG’s Mercedes-Benz brand outlined a strategy last year to continue developing plug-in hybrids while setting up a battery-powered product line.

11. France Launches Incentives to Phase Out Polluting Cars

New incentives intended to phase out polluting vehicles as part of plans to ban the sale of all petrol and diesel cars in France by 2040 have been brought into force by the French government. The incentives, first unveiled last September by French environment minister Nicolas Hulot, are part of France’s climate solidarity package, which came into force on 1 January 2018.

The new year began with an extension of a bonus scheme intended to encourage motorists to replace petrol-engine cars registered before 1997 and diesel cars registered before 2001 with ones that emit less than 130g CO2/km. The up to €1000 bonus for the purchase of new vehicles, which was previously available only to low-income families, has now been extended to all citizens and to second-hand cars. For poorer families, the premium has doubled from €1,000 to €2,000. To buy an electric car, the incentive amounts to €2,500, on top of a €6,000 subsidy.

Measures brought into force at the beginning of the year also include bonuses and tax credits for energy savings at home, and specifically target low-income households.

Finally, this year the French government will increase the carbon tax to €44.6 per ton from €30.50 in 2017, targeting €100 per ton in 2030.

Overall, these measures form part of a wider plan for France to become carbon neutral by 2050 and honor its commitment to the Paris climate deal.

12. EU Emissions Deal Reached for Non-ETS Sectors

The Council and the European Parliament have reached a provisional deal on post-2020 reforms to a regulation established to set limits on greenhouse gas emissions from agriculture, transport, waste and buildings.

The Effort Sharing Regulation (ESR) sets emissions reduction targets for each EU member state for the sectors not covered by the Emissions Trading System (ETS).

The reforms announced on 21 December 2017, which would require non-ETS sectors to reduce their emissions by 30% by 2030 compared with 2005 levels, represent the final environmental act of the Estonian EU presidency. As of 1 January 2018, Bulgaria took over the six-month presidency of the Council of the European Union for the first time since joining the bloc ten years ago.

The ESR proposal is intended to complement the existing land use, land use change and forestry (LULUCF) regulation and the ETS, which aims to help Europe to reduce its emissions by 40% by 2030 compared with 1990 levels.
Under the ESR reform, each member state would have to comply with a binding annual emission reduction target for the period 2021-2030. These targets are calculated based on gross domestic product (GDP) per capita, ranging from 0% to 40% below 2005.

An emissions reduction path would be established for member states to make sure they decrease emissions at a constant pace throughout that period.

As proposed by the European Commission, the starting point will be based on the average emissions from 2016 to 2018, with the start of the trajectory calculation at 2019 and five months, or in 2020, whichever results in a lower allocation for that member state. This starting point has changed from the European Parliament's June 2017 position, which had argued for the starting point to begin at 2018.

Under the proposed reforms, a “safety reserve” with a total of 105 million tons of CO2 equivalent would be created and would be available in 2032. It is intended to help less wealthy member states which may have difficulties reaching their 2030 targets, despite having exceeded their targets in the current 2013-2020 period.

Elsewhere, EU officials agreed to preserve current flexibilities under the ESR to help member states attain their annual limits. They will be able to bank, borrow and transfer annual emission allocations between countries from one year to another within the 2021-2030 period.

In addition to this, there has been the introduction of external flexibilities including the ETS and LULUCF sectors. The one-off ETS flexibility will allow member states which did not receive free allocation for industrial installations in 2013, or which are required to fulfil emission reduction targets above the EU average and their reduction potential, to cancel a limited number of EU ETS allowances.

The LULUCF flexibility will enable member states to make limited use of net removals from certain land use, land use change and forestry.

The agreement, reached by written procedure, must now be formally endorsed by the European Parliament and the Council. The new Bulgarian EU presidency will need to give the proposal the green light, which it is expected to do in early January.

13. EP Backs Tougher Cuts to Transport GHGs

The European Commission must bring its transport emission targets into line with the temperature thresholds outlined in the Paris Climate Agreement, according to a recent report backed by the European Parliament. The 'own-initiative report', which was authored by Greens/EFA rapporteur Bas Eickhout, said the Commission needs to set out ambitious CO2 targets for road transport for 2025 as well as a separate sales target for zero emission vehicles.

These measures would facilitate a complete phase-out of combustion engine cars, Eickhout added.

Eickhout said in a statement: “To make sure we deliver on the Paris deal, greenhouse gas emissions from transport need to be near zero by 2050. The European Commission should respond with new transport targets that are in line with the Paris agreement. These have to be matched with the policies that are needed to make sure they are implemented.”
The own-initiative report was the EP’s reply to Commission’s earlier communication on Low Emission Mobility from July 2016. As such, the report is not binding, and the Commission does not have to directly respond to it.

The actual legislative proposals – which outline car and van CO2 standards for example – were published on 8 November and have been sent to the EP for amendments.

“[The vote] shows where the majorities among MEPs are and paves the way for good amendments on this in 2019, which are legislative binding and will be part of the final regulations on car and van CO2 standards, expected to be finalized in early 2019,” said Julia Poliscanova, clean vehicles manager at NGO Transport and Environment.

The Commission’s proposals in November were criticized by environmentalists for being weak and making too many concessions to carmakers.

In his report, Eickhout said the Commission needs to draw up proposals for fair pricing across different modes of transport that reflect the respective environmental costs of different types of travel, highlighting the heavy taxes and charges that apply to relatively sustainable options such as rail travel.

14. MEPs Slammed Over Lack of Ambition On E-Cars

Climate and energy commissioner Miguel Arias Cañete has criticized MEPs for demanding more ambitious targets for CO2 standards in cars and vans after they helped water down proposals on the deployment of charging points for electric cars. “I must tell you, in electromobility my main concern is the lack of charging infrastructure and the lack of political will to go forward with ambitious proposals,” Cañete told the European Parliament’s environment committee.

The commissioner was referring to a recent agreement by MEPs on reforms to the Energy Performance of Buildings Directive that saw them reject a requirement for the installation of working charging points in the car parks of all residential and commercial buildings. "The ambition was not there, neither in the parliament, nor in the council to go for ambitious charging infrastructure," he said.

Cañete was facing lawmakers to explain a recent ‘clean mobility package’ that included proposal for a 30% cut in permitted CO2 emissions from cars and vans by 2030. Several MEPs had argued that the proposed target was unambitious, and called for a 40%, or in one case 70% reduction.

Lawmakers also questioned the Commission's plan to allow manufacturers to ease the CO2 standards for conventional cars if they surpass production thresholds for low-emission models, while proposing no specific sanctions or penalties for missing the overall target.

The commissioner again blamed MEPs, arguing that it would be difficult to impose a legally binding mandate on car manufacturers without having the capability to deploy the charging infrastructure needed to stimulate demand among consumers.

“When we were proposing that...for every ten parking places there was one charging point, it was not accepted, not even by the Parliament. That’s one of the reasons we haven’t got a bonus-malus system for this target, which was one of the possible alternatives,” Cañete said.
He added that the EU executive would now use all possible policy tools to facilitate the roll out of electric car infrastructure, including the alternative fuels directive. He told MEPs that €800 million in EU subsidies would be made available on a “first come first served” basis, noting that this was the maximum that could be accessed under the current EU budget.

The EU executive is scheduled to table the next instalment of its clean mobility package on 2 May, including a proposal setting limits on CO2 emissions for heavy goods vehicles.

Greenhouse gas output from road transport has risen by a fifth since 1990, while overall EU emissions have fallen by 23%. The sector currently accounts for 22% of the EU’s overall CO2 emissions.

15. Governments Agree Rules on CO2 Reporting for Buses

A European regime for controlling the CO2 emissions and fuel consumption of new buses and lorries has moved a step closer as national representatives agreed to rules on a centralized monitoring and reporting system.

“This was a swift agreement with full support of all member states and we hope the Council and the Parliament will be able to start negotiations early next year,” said Siim Kiisler, environment minister of then EU presidency holder Estonia.

The deal calls for a central EU register for gathering data from authorities and manufacturers, broadly in line with a proposal tabled in May by the European Commission, and the information would be publicly available, the EU Council said. “The only possible justification for exceptions to this general principle will be to protect personal data and fair competition,” the legislative body noted in a statement issued following the agreement.

The monitoring system will be instrumental in enforcing forthcoming emissions standards for the heavy-duty vehicles that the EU executive plans to table in the first half of this year, having recently proposed post-2020 greenhouse gas emissions standards for cars and vans.

The European Parliament – which recently demanded stricter limits for overall transport emissions considering the Paris Agreement on climate change – is due to adopt its own position on the reporting rules for heavy duty vehicles, with an environment committee vote scheduled for 24 January.

Final negotiations, under the direction of the new Bulgarian EU presidency, can begin once the Parliament has adopted its final position, which it is expected to do at a plenary session in February.


All car and van manufacturers met their carbon dioxide (CO2) specific emission targets in 2016, based on current European vehicle test rules, but they will need to continue their efforts to meet future agreed-to cuts. These are the findings of the latest report tracking progress on CO2 emission targets for new passenger cars and vans published recently by the European Environment Agency (EEA). The EEA report, 'Monitoring CO2 emissions from passenger cars and vans in 2016', gives an updated summary of CO2 emission levels of new passenger cars and vans in the European Union (EU) based on measurements performed in the laboratory using a standard European Union vehicle test cycle.
The findings largely confirm preliminary data the EEA published for cars and vans last year. They show that new passenger cars sold in the EU in 2016 had CO2 average emissions of 118.1 grams (g) CO2/kilometer (km), which is 28 % lower than in 2004 when monitoring started, but lower by only 1.2 %, when compared with 2015. The average emissions from vans sold in 2016 were 163.7 g CO2/km, below the 2017 target of 175 g CO2/km and a reduction of 9.2 % since monitoring first started.

To meet their respective future targets, (95 g CO2/km for cars by 2021 and 147 g CO2/km for vans by 2020), average CO2 emissions for new cars and vans will need to continue decreasing at a similar pace.

Data on manufacturer’s individual performances show that all car and van manufacturers met their CO2 specific emission targets in 2016. While certain manufacturers would have exceeded their specific emission target, if considered individually, they met their obligations as members of pools.

Conventional diesel and petrol cars accounted for a large majority of new sales in 2016 (96.5 %). However, for the first time since 2009, the share of diesel vehicles dropped below half of all new passenger car registrations. However, they remained the most sold vehicles in Europe, making up 49.5 % of sales. The proportion of plug-in hybrid and battery electric vehicles remained largely the same as in 2015, making up around 1 %. For vans, most vehicles are fueled with diesel (96 %).

Diesel cars, which on average are around 300 kilograms (kg) heavier than petrol cars, emitted on average 116.8 g CO2/km. This is 4.9 g CO2/km less than the average for petrol cars. In 2000, the emission difference between diesel and petrol cars was much larger, exceeding 17 g CO2/km – the average efficiency advantages of diesel vehicles continue to decrease.

Amongst the largest car manufacturers, Automobiles Peugeot (102 g CO2/km) and Automobiles Citroen (103 g CO2/km) had the lowest average CO2 emissions for new passenger cars registered in 2016, while Toyota Motor Europe had the highest percentage of new vehicles having emissions below 95 g CO2/km (44 %).

The largest reductions in average emission levels of passenger cars in the last year were achieved by Jaguar Land Rover Limited (a reduction of 14.2 g CO2/km) and Chrysler (12.1 g CO2/km).

As in each year since vans monitoring commenced, Automobile Dacia SA was the lowest-emitting vans manufacturer (124 g CO2/km in 2016). Among van manufacturers in 2016, Ford Motor Australia reduced its average emissions the most (by 22.7 g CO2/km).

In accordance with current EU regulations ((EC) No 443/2009 for passenger cars and (EU) No 510/2011 for vans), the EEA collects data on all new vehicles registered in Europe and makes it available online. The data collected includes information on various parameters, including CO2 emissions and vehicle mass. Data is reported by all Member States to evaluate the performance of the new vehicle fleet towards the respective CO2 emissions targets.

For 2016, Member States reported new vehicles' CO2 emission levels, measured under standardized laboratory conditions, following the requirements of the New European Driving Cycle (NEDC) test procedure. Due to growing acceptance that the NEDC test procedure was outdated
and did not necessarily represent real-world driving conditions and emissions, in June 2016 the European Commission proposed to adopt a more demanding World Harmonized Light Vehicle Test Procedure (WLTP), a globally harmonized test procedure developed within the United Nations Economic Commission for Europe (UNECE). Following recent agreement within the EU, the new WLTP test is mandatory for all new vehicle types introduced from September 2017 and for all new vehicles from September 2018.

The European Commission has recently proposed setting new CO2 emission standards for cars and vans for the period after 2020. The proposed framework builds on the current Regulations setting CO2 emission standards for cars and vans.

17. Milan And Turin Ban Cars to Combat Smog and Air Pollution

Bans on certain types of vehicle have been introduced temporarily in Milan and Turin, both of which have exceeded safe limits for pollution recently. Despite hopes that rain and lower levels of traffic during the holiday season would help combat smog, air pollution has crept to dangerous levels in recent weeks.

A daytime traffic ban has been extended to include relatively clean Euro 5 diesel cars in Turin, as the city raised its air pollution alert level to “red”. As a result, half-a-million cars and vans were not able to drive on the city's roads between 8am and 7pm every day, La Repubblica newspaper reported.

In Milan an “orange” warning went into force, limiting vehicles classified as having Euro 4 emission standards or lower.

Similar traffic limitations went into place across much of northern Italy. Across the Veneto region, 85 municipalities introduced similar measures.

Last year, a report from environmental organization Legambiente, revealed that 25 cities in Italy had exceeded the EU’s air quality standards by mid-October. PM10 pollution was a particular problem, it said.

European Union standards dictate that cities should have no more than 35 days of poor air quality, when PM10 levels rise above a threshold amount, every year.

In Turin safe limits were recently exceeded for 15 consecutive days.

Restrictions on cars are not new to Italy and major cities including Rome have previously attempted to address the country’s air pollution problem by implementing vehicle bans.

Current bans follow a trend of particularly poor air quality in the “industrial triangle” of northern Italian cities. Between January and mid-October, Turin had 66 days of poor air quality and Milan had 50. Other cities with extended periods of excessive pollution include Venice, Cremona and Padova.

Further east in Verona, a ban has been implemented on stoves and fireplaces to curb its levels of pollutants. Verona's environment councilor Ilaria Segala told the Corriere della Sera newspaper that Arpav, the environmental protection body for the Veneto region, was unlikely to "trigger further restrictive measures" because of the weather forecast.
18. 80% Of Urban Italians Exposed to Toxic Air Pollution

Four out of five urban dwellers in Italy are exposed to toxic air pollution, according to a report on the state of the environment in Italian cities. The study, which was published recently by Italy's environment agency, ISPRA, found that 82% of people living in Italian cities are subject to PM10 values beyond the World Health Organization’s safety standards. The percentage is 79% for PM2.5 and 32% for nitrogen dioxide (NO2), according to the report.

The report covers 119 municipalities for 2016 and the first six months of 2017. It shows that EU daily limits for PM10s — 50 μg/m³ — were surpassed in 34 towns, while annual limits for NO2 were exceeded in 21 urban areas, and the annual ceiling for PM2.5 in seven cities.

Air pollution associated with these substances has slowly decreased in the past 10 years due to the substitution of oil and coal with natural gas, and better filtering of car and industrial emissions. But for ozone, which is mainly the result of fossil fuel use, the situation has not improved. In 2016, safety limits were exceeded in 38 urban areas for more than 25 days, according to the report.

Other findings to emerge from the study included:

- Almost 10 million polluting cars (‘Euro 0’ to ‘Euro 2’) are still in circulation in Italy
- 938 industrial plants are in urban areas
- The allergenic pollen season was 4-5 days longer in 2016 compared with 2014 and 2015
- In 96 towns, less than 5% of the territory is dedicated to public green areas.

In July 2017, the European Commission launched a ‘fitness check’ to assess the impact and failings of the EU’s Ambient Air Quality (AAQ) Directives, as many EU countries have failed to comply with targets. A total of 29 infringement cases are pending, including against Italy.

19. Lithuania Starts Drawing Up National Air Pollution Reduction Plan

Lithuania has started drawing up a national air pollution reduction plan to meet its targets for cutting pollutant emissions by 2020. The Environment Ministry expects that the plan will help solve at least some of the problems associated with air pollution: to combat morbidity and premature mortality and to reduce the scope of the pollution-caused degradation of ecosystems.

The plan will be drawn up based on a EU directive that sets 2020 and 2030 air pollutant emission reduction targets for the EU and each individual member state. The targets are aimed at reducing the health impacts of air pollution in the EU by almost 50 percent compared with 2005, the ministry said in a press release.

Lithuania is to cut its emissions of sulfur dioxide by 55 percent by 2020 from 2005 levels, of nitrogen oxides by 48 percent, of non-methane volatile organic compounds by 32 percent, of fine particulate matter by 20 percent, and of ammonia by 10 percent.

It will have to reduce sulfur dioxide emissions by another 5 percent between 2020 and 2030, nitrogen oxides emissions by 3 percent, volatile organic compounds emissions by 15 percent, and fine particulate matter emissions by 16 percent.

20. UK: New Car CO2 Emissions Rise for First Time In 14 Years
New figures released by the UK Department for Transport show that increasing petrol car sales have pushed overall CO2 emissions from cars up for the first time in 14 years. Statistics for the first ten months of 2017 show that the average new car produces 121.1 g of CO2/km. The full annual figure is on course to exceed the 120.3 g/km recorded in 2016. This ends a 14-year trend of falling CO2 emissions, which have declined by 4.02 g/km annually since 2003. The information is based on data on new car registrations, collected by the UK Driver and Vehicle Licensing Agency (DVLA).

The increase in CO2 emissions has been caused by the slump in sales of diesel cars and increased sales of petrol vehicles that have higher CO2 emission ratings than diesels. (Of course, as has been widely reported, actual in use real world CO2 emissions have been increasingly higher than the official ratings.) UK diesel sales have declined by 16% this year, driven by the market uncertainty as various levels of government adopt or consider taxes and intercity charges that discriminate against diesel cars.

21. London Exceeds Annual Air Pollution Limit Just One Month Into 2018

London has already hit the legal air pollution limit for the whole of 2018. Figures have been released that show the capital has already exceeded its annual pollution limit after just one month.

Environmental campaigners are urging the Government to take urgent steps, including creating and funding clean air zones in pollution hotspots across the UK. Government estimates suggest that compliance for levels of nitrogen dioxide, much of which comes from road vehicles, will not be met until 2026.

London has taken longer to reach the air pollution limit this year than last year – when legal levels were breached less than a week into January.

Air pollution is linked to the early deaths of about 40,000 people a year in the UK, and causes problems such as heart and lung diseases, as well as asthma.

Meanwhile ministers, including from the UK, were called to Brussels to discuss the ongoing failure by many EU countries to meet legal targets to cut air pollution, and the action that is being taken to reduce the problem. After the meeting, EU Commissioner Karmenu Vella said ministers had ‘some positive suggestions’, but they were not substantial enough and limits could be exceeded ‘even well beyond 2020’.

Countries – including the UK – face legal action from the EU if urgent measures are not introduced to tackle the problem. Legal charity ClientEarth took the Government to court recently for the third time over its air pollution strategy. Ugo Tadei, a lawyer for the charity, said: ‘The Commission should wait no longer and take immediate action in court, rather than having more meetings. People in the UK have waited long enough to breathe clean air.’

22. Brussels Issues an Ultimatum on Excessive Air Pollution

Ministers have been told by Brussels they must draw up plans to reduce air pollution within days or face legal action. Brussels said a case would be sent to the European Court of Justice (ECJ) if the response is deemed weak, potentially leading to a large fine.

The UK Government was ordered by a court to publish an action plan last July as it was revealed eight million children breathe in illegal levels of air pollution. The European Commission yesterday
called for the UK ‘to address this life-threatening problem with the urgency it deserves’. At a meeting in Brussels, junior minister Therese Coffey was told the UK should take ‘all possible measures without delay’.

The warning was also given to France, Germany, Spain, Hungary, Italy, the Czech Republic, Slovakia and Romania.

The EU’s environment commissioner Karmenu Vella said: ‘The only thing that can keep the Commission from going to court is if the action taken is sufficient to reach the targets without any delay.’ He added: ‘In our meeting there were positive suggestions, but these were not enough to change the bigger picture.’

Mr. Vella said: ‘The deadlines for meeting the legal obligations have long elapsed. Some say we have waited already too long.’ Steps needed include creating incentives for the transport, energy and agricultural sectors to reduce pollution, he added.

Any referral to the ECJ could prove embarrassing for the UK Government as it seeks to negotiate a divorce agreement with Brussels. The UK is also likely to have to meet the EU obligations during a Brexit transition period and as a requirement under an eventual trade deal. A fine would be determined according to how long the rules have been broken, with the UK having fallen foul of Brussels standards since 2010.

The Environment Department said: ‘Air pollution has improved significantly since 2010, but we recognize there is more to do which is why we have put in place a £3.5billion plan to improve air quality and reduce harmful emissions.’

### 23. Low Emission Zone in Leipzig Effective in Reducing Particle Pollution

An air quality study in Leipzig, Germany, found that the ambient concentrations of toxic combustion aerosols that are primarily produced by motor vehicles has been reduced by as much as 60-70% since the introduction of a Low Emission Zone (LEZ) in the city. However, the LEZ appeared to have no effect on NOx exposures. The findings are part of a joint scientific study by the Saxon State Office of the Environment, Agriculture and Geology (LfULG) and the Leibniz Institute for Tropospheric Research (Tropos).

The LEZ in Leipzig was established in 2011, limiting access for diesel vehicles to those certified to Euro 4 and higher emission standards. The ban of older vehicles and subsequent modernization of the car fleet resulted in slightly reduced PM10 and PM2.5 mass concentrations. However, the mass concentration of black carbon (soot particles) emitted mainly from diesel vehicles decreased by 60% in the city center. Furthermore, the number concentration of ultrafine particles, which can penetrate deep into the lungs, decreased by approximately 70%. These particles are believed to be among the most toxic and carcinogenic pollutants from motor vehicles.

Despite modernized diesel vehicles, NOx concentrations did not follow these trends and remained nearly constant. However, the main achievement of the Low Emission Zone was the improvement of air quality by the reduction of the most dangerous particles—according to the authors of the study.

Scientists from both institutes investigated air quality changes over the period of seven years. Thirteen monitoring stations in Saxony provided data. Seven of these 13 stations were equipped for the measurement of black carbon and ultrafine particles.
Reduction of exposure to vehicle pollutants at the Leipzig Mitte monitoring station [LfULG/Tropos report]

The modernization of the vehicle fleet accelerated the effect of the low emission zone. However, the proportion of diesel vehicles registered in Leipzig increased from 19% to 26% between 2010 and 2016—with negative consequences. While black carbon and the number concentration of ultrafine particles decreased, the concentration of NOx is stagnant and remains too high.

### 24. EU Governments Settle For 27% Renewables Target

Energy ministers have agreed that the EU should derive at least 27% of its energy from sustainable sources by 2030, as they adopted their position on a proposal to reform the Renewable Energy Directive (RED). With the union on track to meet a 20% renewable energy target by the end of the current decade, the EU Council is in effect calling for less than half the increase in the decade to 2030 than demanded by the European Parliament's industry and energy committee, which recently called for a 35% renewables share.

Environmental groups were dismayed that EU governments stuck with the target agreed by heads of state more than a year before the 2015 Paris Agreement. Only Portugal and Denmark called to move beyond 27%, despite the European Commission having acknowledged recently that the cost of meeting a 30% target would not be much different.

The positions of the Council and Parliament also differ considerably in terms of what is understood by ‘renewable’ energy in the context of the directive, with potentially far-reaching consequences for the EU’s future energy mix. Ministers rejected the European Commission’s proposal to cap the share of ‘first-generation’ biofuels in transport at 3.8%, instead opting to retain the existing 7% limit to “provide certainty to investors”, according to a statement from the Council. Moreover, this is combined with a 2030 renewables target for the transport sector of 14% – two points higher than that agreed by MEPs, while the EU executive had proposed dropping the requirement entirely.

The European Parliament is expected to vote on and possibly amend the industry committee’s position on RED reforms in January, paving the way for back room talks with government
delegates in the EU Council as the EU’s two legislative bodies seek to hammer out a compromise legislative text.

In the transport sector, there is also a sub-target of 3% for ‘advanced biofuels’, with an intermediate binding milestone of 1% in 2025. Electromobility is encouraged by two multipliers of 5× for renewable electricity used in road transport, and of 2× for rail transport.

Furthermore, the definition of food and feed crops has been changed in a way that would exempt European grown crops like rapeseed from this limit. Member states can set a lower limit—if they do, they will be rewarded with the option of lowering their overall target for renewables in transport.

Anti-poverty organization Oxfam and the Transport & Environment (T&E) group deplored the policy and said it would only benefit the biofuels industry and contribute to hunger and environmental damage.

**Infographic - Clean Energy for Europeans: Key for Driving Forward the Energy Union**

25. Germany: Funding Guidelines for the “Clean Air 2017-2020” Program

German government has published the funding guidelines for alternative propulsion systems under the Clean Air 2017-2020 program. The program includes many measures to improve air quality in cities. The funding of 1 billion euros is now available, with additional funding expected in the future.

The Clean Air 2017-2020 program covers three groups of measures:

- Electrification of urban transport and construction of the charging infrastructure,
- Digitization of transport systems, and
- Retrofitting of diesel buses in public transport with exhaust aftertreatment systems.
Funding guidelines for the program have been published in the German Federal Gazette. These include the updated guideline “Electromobility” of the Federal Ministry of Transport and Digital Infrastructure (BMVI) and the new “Electric Mobility” Directive of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) and the Federal Ministry for Economic Affairs and Energy (BMW). The announced funding promotes the procurement of electric vehicles by municipal vehicle fleets and the development of charging infrastructure.

26. Macedonia Introduces Emergency Air-Pollution Measures

Macedonia has introduced emergency measures against dense pollution levels that envelope its cities.

The annual winter smog problem that besets cities in the Western Balkans is blamed on a mix of coal burning, aging industry, and high-polluting emissions from older vehicles. Macedonia's government says residents of Skopje and Tetovo have been granted free travel on trains and buses to discourage the use of cars.

People with chronic illnesses and pregnant women are excused from work and outdoor sports activities have been temporarily banned.

A World Health Organization (WHO) study published early in 2017 listed Skopje among 10 European cities with the highest concentration of toxic particles. Skopje and four other Balkan cities on that list rely upon high-polluting lignite coal for heat during winters -- a holdover from decades of communist rule in the former Yugoslav republics.

Sarajevo, Tuzla and Zenica in Bosnia-Herzegovina, and Kosovo's capital, Pristina, also suffer from similar high levels of air pollution.

A recent study by the Health and Environment Alliance (HEAL) found 16 aging, communist-era lignite power plants in former Yugoslav republics emit as much pollution as all 296 power plants in the European Union.

As part of their bids to join the EU, governments of ex-Yugoslav republics have pledged to reduce emission levels.

27. EP Rubber Stamps Aviation ETS Compromise

The European Parliament has voted overwhelmingly to adopt legislation that exempts flights in and out of the European Economic Area (EEA) from the EU emissions trading system until December 2023, when the UN aviation agency’s global offsetting scheme is set to begin.

A plenary vote in Strasbourg saw the parliament adopt a report by UK Conservative MEP Julie Girling with 544 votes in favor to 54 against, with 31 MEPs abstaining.

The vote is a rubber stamp of a compromise deal done with the European Council in October, which agreed that the exemption would run until December 2023. The legislation allows for a review once the International Civil Aviation Organization has finalized details on how it will implement a global market-based measure.
They ensured that the European Commission will have to review the legislation with a view to including the CORSIA scheme in the EU ETS, so intra-EU and intercontinental flights are covered by a single system.

The compromise deal also agreed that more will be done to reduce emissions from intra-EU flights by means of a “linear reduction factor”, which is a yearly reduction of emission permits placed on the EU carbon market.

The EP and Council agreed in October on measures - recently agreed, with amendments, by the EU executive’s climate change committee - to protect the EU ETS in the event of UK allowances flooding the bloc’s trading scheme once the UK leaves the EU.

### 28. Car Industry Wants Common Approach to City Mobility

Manufacturers, city, motorist and industry representatives met in Brussels recently to discuss urban vehicle access regulations (UVARs). The discussions were organized by the transport policy network for cities and regions, Polis, the European Automobile Manufacturers' Association (ACEA), European Council for Automotive R&D (EUCAR) and the European Road Transport Research Advisory Council (ERTRAC).

Participants agreed on the need for “consistency and transparency” and for the Commission to “provide a comprehensive analysis” of the schemes.

Schemes to restrict vehicle access to urban infrastructure for environmental and financial objectives —ranging from road tolls to congestion and emission charges — are now in place in hundreds of EU cities, according to the Commission.

The auto-manufacturers trade body ACEA is calling for new restrictions to be coordinated and based on Euro emissions standards to encourage newer diesel, petrol and alternative technologies. “In order to maintain the single market and avoid customer confusion, ACEA believes that countries and cities facing air quality problems should take a common, harmonized approach,” a spokesperson told the press.

In April 2017 a Commission report said that while the growing diversity of regulations could fragment the single market there could be no one-size fits all approach. Non-binding guidelines said that authorities should use Euro standards as a basis for access regulations, gradually phasing out older Euro standards.

A spokesperson for NGO Transport and Environment said local authorities “should be allowed to restrict vehicles to cut pollution”, and that these restrictions “should be based on vehicles’ real-world emissions”. The group has previously warned that the industry is rolling out software emissions upgrades to “push back against city policies and bans” and called for cities to be allowed to temporarily ban and permanently restrict diesel vehicles.

The mayor of London said recently the city could expand the Ultra-Low Emission Zone which comes into force in 2019 to include all vehicles in a wider area, reducing by 80% by 2021 the number of people living in areas exceeding legal air pollution limits.
29. Sharply Criticizing Obama EPA, Pruitt Pledges 'Lots of Rollback' Of Rules

EPA Administrator Scott Pruitt is underscoring what he sees as the failures of the agency under the Obama administration, sharply criticizing a host of regulations and signaling that his administration will continue its aggressive program to roll back a host of measures he believes create industry uncertainty.

“Over the last several months, we've been focused on trying to fix that which the previous administration did incorrectly, and that means we have a lot to do,” Pruitt said during a November 30 event co-hosted by the free-market groups Heritage Foundation and the Texas Public Policy Foundation (TPPF). “There's lots of rollback that's occurring.”

Pruitt was being interviewed by TPPF CEO Brooke Rollins, who called his efforts to date to undo a host of major Obama EPA climate, water and air rules “truly heroic.” In response, the administrator said, “the bar is so low. It's like an 0-11 football team going 6-5 and saying you should be in the Super Bowl. That's one reason we have so much opportunity to get things right.”

He cited a pair of high-profile regulations that the agency has proposed to rescind: the Clean Power Plan (CPP) greenhouse gas limits for the utility sector and the Clean Water Act (CWA) jurisdiction rule. He also praised President Donald Trump's June announcement that he plans to withdraw from the Paris climate deal.

“We've got a lot of work to do. We've got a lot of territory to cover still, things you don't hear a lot about,” he said.

Pruitt did not outline any of the suite of lower-profile rules that his agency is targeting, including proposals to scrap GHG limits for so-called “glider” trucks, delay first-time methane standards for the oil and gas industry, soften standards for coal ash, weaken water rules for utility toxics and roll back rules that had tightened risk management plan facility safety standards.

He reiterated his prior claim that the Trump EPA rollbacks are not “deregulation” but are rather attempts to provide certainty to regulated industries. “What we're doing is undoing those rules that were deficient, but then providing answers going forward to provide certainty in the marketplace,” he said, citing as an example the agency’s obligation to craft a “definition” of jurisdictional waters under the CWA.

“The past administration did [that CWA definition] very poorly. We have to fix that,” he said.

During the November 30 interview, Pruitt did not mention the landmark 2009 GHG endangerment finding that forms the basis of nearly all of EPA's climate rules, and he has hedged in the past on whether he would seek to reverse that finding. However, TPPF has urged EPA during its CPP repeal process to launch a long-term review of the climate risk finding, in addition to overturning an Obama EPA legal interpretation that it did not need to make a power sector-specific GHG endangerment finding before issuing the CPP in the first place.

30. Vehicles Are Now America's Biggest CO2 Source; EPA Is Tearing Up Regulations

For the first time in more than 40 years, the largest source of greenhouse gas pollution in the US isn't electricity production but transport – cars, trucks, planes, trains and shipping. Emissions data has placed transport as the new king of climate-warming pollution at a time when the Trump administration is reviewing or tearing up regulations that would set tougher emissions standards
for cars and trucks. Republicans in Congress are also pushing new fuel economy rules they say will lower costs for American drivers but would also weaken emissions standards.

Opponents of the administration fear this agenda will imperil public health and hinder the effort to address climate change. “This Environmental Protection Agency doesn’t seem to have met an air regulation that it likes,” said Mary Nichols, chair of the California Air Resources Board and a former EPA assistant administrator. “I’ve not seen any evidence that this administration knows anything about the auto industry, they just seem to be against anything the Obama administration did.

“Vehicle emissions are going up, so clearly not enough is being done on that front. The Trump administration is halting further progress at a critical point when we really need to get a grip on this problem.”

New cars and trucks, which account for more than 80% of transport emissions, now must meet fuel efficiency standards and display this information to consumers. This approach has helped tamp down greenhouse gas emissions. But in 2016, about 1.9bn tons of carbon dioxide emissions were emitted from transportation, up nearly 2% on the previous year, according to the Energy Information Administration. This increase means that transport has overtaken power generation as the most polluting sector in the country, and it’s likely to stay that way.

Cheap gasoline prices have led to a recent uptick in vehicle emissions, despite the fuel efficiency standards, while coal is being rapidly displaced by an abundance of cheap natural gas and the steady rise of renewable energy, driving a sharp decline in CO2 emissions from the power grid.

31. California-Trump Administration Appear to Be on A Collision Course

Pruitt's Comments Hint EPA Might Target California's Vehicle Waiver Power

EPA Administrator Scott Pruitt's recent complaint that California can “dictate” strong light-duty vehicle greenhouse gas rules for the rest of the country is sparking a renewed sense that the agency might seek to revoke the state's special Clean Air Act waiver allowing it to set more stringent GHG limits than the federal government. Such a move would put EPA on a legal collision course with California and other defenders of the Obama-era standards for model years 2022-2025, as Trump officials have reopened a mid-term review of those requirements.

At a December 7th House Energy & Commerce environment panel hearing, Pruitt appeared to question California's vehicle programs, in response to a query from Rep. Doris Matsui (D-CA) about whether he supports the state's air law authority to seek a waiver from EPA for its own light-duty vehicle standards. "Federalism principles do not say that one state can dictate to the rest of the country the standard for the entire country," Pruitt said.

Pruitt during the hearing also suggested that the state's waiver authority through MY25 is not ironclad, saying the agency may reexamine it as part of its pending mid-term review. “There is a statutory waiver for California that is evaluated as part of the mid-term review,” Pruitt said.

Neither of his remarks explicitly repudiate California's use of its waiver to implement vehicle GHG regulations, with one possible interpretation of his “statutory waiver” statement being that Pruitt is merely alluding to the fact that EPA must work with the state as it conducts the mid-term review.
The Obama-era determination to retain its MY22-25 vehicle standards includes at several points general references to the relationship between EPA and California's program, though it does not suggest that the agency specifically evaluated the state's waiver when crafting that determination.

California's waiver gives it critical leverage in upcoming debates over the vehicle standards because automakers strongly oppose having to comply with differing requirements covering two separate swaths of the country. To retain a unified national program, the Trump administration and California would have to agree on any changes.

While one of the state's requests for a waiver has been denied -- during the George W. Bush era -- the agency has never revoked an existing waiver. Additionally, the air law does not outline a procedure for rescinding a waiver and says that California should be given wide deference on the issue.

California has already announced efforts to develop its program out to MY30, an effort that would ultimately require -- but does not now need -- a new waiver from EPA.

Pruitt's December 7 remarks on waiver-related issues came just days prior to December 12 remarks from House Energy & Commerce environment panel Chairman John Shimkus (R-IL), who during a hearing on the vehicle standards appeared to tee up a possible longer-term attack on California's overall air act authority to seek waivers for GHG rules. "Looking ahead, we need to ask whether we still want three agencies involved in fuel economy and why we gave California so much more power than any other state," he said.

California Escalates Warning Over Trump Attacks on GHGs, Vehicle Policies

California officials are intensifying warnings over Trump administration actions that threaten the state's authority to reduce greenhouse gases and other pollutants from vehicles and energy production, escalating an already bitter war between one of the most aggressive and influential states on environmental issues and a president who is targeting a host of Obama-era climate and environmental policies.

"Unfortunately, the current administration is actively at work dismantling the federal response to climate change and clean air," California Air Resources Board (CARB) Chairwoman Mary Nichols told state lawmakers during a January 4 legislative hearing on the board's sweeping regulatory plan to meet the state's 2030 GHG emissions target.

"Between disbanding the federal climate advisory panel, preparing to rescind the Clean Power Plan, court actions rolling back federal laws on short-lived climate pollutant reduction strategies, and withdrawing from the Paris climate agreement, every month brings another rollback and increasingly alarming policies that really threaten the progress that's been made to protect public health and our climate," Nichols added.

Nichols also elaborated on her fears that EPA plans to attack California's longtime Clean Air Act authority to enforce tougher vehicle standards than the federal government, and said she expects the Trump administration will not work with the state on enforcement cases targeting diesel emission cheating, similar to the landmark settlement with Volkswagen.

During the recent legislative hearing, Nichols seemed most alarmed at a potential EPA attack on the state's vehicle waiver authority, because it is critical to the state meeting its climate targets.
and because it gives the state significant leverage in negotiations about whether to change GHG rules for passenger vehicles and heavy-duty trucks.

“While we continue to seek a productive working relationship with the federal government, when it comes to the vehicle emission standards, the Trump administration may choose not to approve our waivers to pursue future standards, or even attempt to attack our authority altogether,” Nichols said.

The remarks expanded on her recent interview in which she said an attempt by EPA to revoke California’s waiver for GHG rules for light-duty vehicles might be the “next shoe to drop.” That followed December congressional testimony from EPA Administrator Scott Pruitt, who signaled a potential attack on the state’s waiver. “Federalism principles do not say that one state can dictate to the rest of the country the standard for the entire country.”

At the January 4 hearing, Nichols said that if California “were to lose the ability to set [GHG] standards for vehicles, we would certainly fight -- we would fight it with every legal tool that was available to us as well as all other tools that are available in the court of public opinion.”

But she warned that if the Golden State were to lose such a battle, “we would really lose significant reductions that are needed to achieve all of the various objectives that we’ve been talking about here today. Our ability to reduce mobile source emissions, including greenhouse gases, and criteria and toxics, would be hugely impaired. Not to mention the negative impact that this would have on the health of nearby communities. And, if we were to try to continue to achieve our overall goals, we would have to make up the remaining reductions through alternative measures that would be directed at other sectors as necessary.”

She also raised concerns that Trump officials are also pulling back their support for joint state-federal enforcement actions against auto companies that have intentionally rigged diesel vehicles to emit more pollution in violation of state and federal standards, following the landmark settlement California and the Obama administration developed with Volkswagen in 2016, Nichols said. “We’ve been told that the Justice Department has now decided they don’t want to do those kinds of settlements in the future,” she said. “So, we have another pending case against another company that was doing something different but somewhat similar to what Volkswagen did, and we will not be getting the same amount of help and collaboration with the Trump administration that we did in the past.”

Cooperation with the federal government in the Volkswagen settlement was critical in requiring the company to agree to put more than $3 billion into a special fund for all states to reduce transportation sector nitrogen oxides that would offset the excess pollution caused by the fraudulent VW vehicles, Nichols said.

GOP, Industry Cite Consumer Claims to Defend Vehicle GHG Rule Rollback

House lawmakers and auto industry representatives are ramping up efforts to defend the Trump administration’s plan to offer more flexibility under EPA’s light-duty vehicle greenhouse gas standards, arguing the move would help consumers afford new vehicles, accelerate fleet turnover and help reduce emissions.

The pitch, aired at a December 12 joint hearing of two House Energy & Commerce subcommittees with jurisdiction over environmental issues, comes as defenders of the standards counter that any
initial consumer benefits of rule rollbacks are overstated and that weakening the rules would also deprive consumers of vehicles with a lower lifetime cost of ownership.

“The stakes are high for automakers and auto dealers, but they are higher still for consumers,” said House Energy & Commerce environment subcommittee Chairman John Shimkus (R-IL), faulting the Obama EPA for a “rushed” decision in January to retain its vehicle GHG standards model year 2022-2025 as written.

Similarly, Energy & Commerce consumer protection subcommittee Chairman Bob Latta (R-OH) said he looked forward to discussing ways to “support choice for American consumers and jobs across the country,” and argued that “duplicative” standards at EPA and the National Highway Traffic Safety Administration (NHTSA) “could force families to choose older cars without the benefits of new safety technologies.”

Alliance of Automobile Manufacturers President Mitch Bainwol during his testimony reprised several arguments that automakers have already been making to defend reopening the mid-term review -- including that the Obama EPA's decision to keep the standards unchanged ignored the fact that “much has changed” since the agencies issued the original MY17-25 rules in 2012. Key issues that have changed, he said, include low gasoline prices that are driving consumers toward less-efficient trucks.

With respect to the harmonization issue, Bainwol also cited a prior quote from EPA transportation and air quality chief Chris Grundler declaring that he is “all in” on the idea of harmonization, to avoid a situation where automakers are subject to fines under fuel economy rules even if they meet EPA standards.

But Bainwol also offered a consumer-oriented argument in favor of revisiting the standards, noting that the “most important thing you can do” is to ensure quicker vehicle fleet turnover, which means keeping vehicle prices down.

Forrest McConnell, a former chairman of the National Automobile Dealers Association, similarly cited a figure that the total cost of complying with the “one national program” under the EPA and NHTSA regulations is roughly $3,000 per new vehicle, a figure that appears to be based on agencies' projections from the 2012 rules. That $3,000 figure, however, drew some fire at the hearing because EPA in its subsequent technical assessment report on the regulations found compliance costs for vehicles from today forward are less than half that figure.

And most Democratic lawmakers -- as well as Union of Concerned Scientists' (UCS) David Cooke -- focused on economic arguments to defend the need for strong vehicle standards, arguing the current standards are needed to keep the U.S. competitive, maintain certainty for suppliers that have invested in fuel economy equipment, and lower consumers' lifetime cost of owning vehicles.

House Energy & Commerce Committee ranking member Frank Pallone (D-NJ), for example, called any rollback of the standards a threat to U.S. competitiveness. “If the U.S. auto industry is to remain competitive in the global market we must reject efforts to move backwards.”

Consumer panel ranking member Jan Schakowsky (D-IL) similarly pushed back against automakers' demands for “harmonization” of vehicle GHG and fuel economy programs, arguing that the automakers are seeking expanded compliance credits that are a recipe for “stagnation.”
And UCS’s Cooke cited estimates, in response to questioning from Rep. Doris Matsui (D-CA),
that the current regulations even with today’s low gasoline prices, would save consumers about
$3,000 per car and $5,000 per truck over the lifetime of a vehicle.

The joint hearing waded into other controversial issues, including the role of California in the
current battle over vehicle standards. Shimkus appeared to tee up a potential longer-term Hill
attack on California’s special authority under the Clean Air Act to regulate vehicle emissions after
receiving waivers from EPA. “Looking ahead, we need to ask whether we still want three agencies
involved in fuel economy and why we gave California so much power than any other state,” he
said during his opening statement.

Both Bainwol and Global Automakers President John Bozzella, in response to queries from Rep.
Debbie Dingell (D-MI), also embraced the general notion of discussing post-2025 vehicle
regulations. That appears to reference ongoing talk that progress on such standards would be
needed to avert full-scale war with California over any alterations to pre-2025 regulations.

“That conversation needs to happen, yes,” Bainwol said. “I would agree,” Bozzella added, noting
that his group is committed to improving fuel economy, and doing so “over the long haul.”

**Fuel-Efficiency Talks Intensify**

California and the Trump administration will hold a series of new talks over fuel efficiency rules
as the auto industry still hopes for a deal to retain nationwide requirements. Officials from the
California Air Resources Board are set to meet in Washington for another round of discussions
on the 2022-2025 fuel-efficiency rules, automakers and government officials said recently.
Environmental Protection Agency chief Scott Pruitt told Reuters last week that more talks are also
planned in California in the coming weeks.

Automakers want the White House and California to reach agreement on revisions because a
legal battle over the rules could result in lengthy uncertainly for the industry. A group representing
General Motors, Volkswagen, Toyota and other automakers has encouraged more talks between
California and federal regulators in hopes an agreement can be reached.

In 2011, California’s air emissions regulator and the Obama administration reached an agreement
with major automakers to nearly double average fleetwide fuel efficiency to more than 50 miles
per gallon by 2025 but included a “midterm review” to determine by April 2018 whether the final
requirements were feasible.

California, joined by nearly a dozen other states, could seek to enforce existing emissions rules,
even if the Trump administration softens the federal 2022-2025 requirements.

The Trump administration met with California officials on December 15 to discuss the program.
The meeting included EPA air office chief Bill Wehrum, National Highway Traffic Safety
Administration (NHTSA) deputy chief Heidi King, and White House aide Mike Catanzaro.

NHTSA plans to issue its proposed changes, if any, for the 2022-25 model years by March 30.
The agency is “on track” to meet that deadline, King told reporters on the sidelines of the Detroit
auto show recently. She expects it to propose “a broad range of options.”

In June, New York state’s attorney general and 12 other top state law officials said they would
mount a court challenge to any effort to roll back vehicle fuel rules.
Wehrum Floats Subtle Threat to Revoke California Vehicle GHG Authority

EPA air chief Bill Wehrum says he has “no interest whatsoever” in seeking to revoke California's special authority to regulate passenger vehicle greenhouse gas emissions, though he is not ruling out such a move if Trump officials and the state cannot agree on a unified set of national standards for model years leading up to 2025. “I have no interest whatsoever in withdrawing California's authority to regulate, but I also want a national program,” Wehrum said during a January 25 appearance at the Washington Auto Show. “If we can all agree as to what needs to be done, then we can all go forward on that basis.”

The remarks could be considered an implicit threat of an EPA attack on the California Clean Air Act waiver of federal preemption on the vehicle rules, if state officials do not agree with any proposals by the Trump EPA and Transportation Department (DOT) to weaken federal GHG and fuel economy standards for MY22-25.

Officials with EPA, DOT and the California Air Resources Board (CARB) have engaged in negotiations on the future of those standards over the past several weeks, ahead of the federal agencies' plan to formally announce by April 1 whether they would like to change the current requirements set by the Obama administration. Wehrum characterized the talks with CARB as “very productive,” though when talking about the state's authority he repeatedly stressed the need for “maintaining uniformity and consistency” among the three sets of standards. He said he has heard the need for such alignment “loud and clear” from auto stakeholders.

This stress on aligned programs contrasts with his recent remarks to Inside EPA when he acknowledged that the agency's review of Obama-era vehicle standards could result in California adopting different requirements than the Trump administration, causing a patchwork of standards that the auto industry opposes.

But prospects that California will go along with any administration effort to revise the rules appears to be limited. During a separate SAE International event alongside the auto show, CARB's Joshua Cunningham said the state is “pleased to be part of those discussions” with federal officials to review the latest data on technology and compliance but suggested officials see no need to revise the current requirements. “To date we have not seen anything new in the past year . . . that changes our decision” from March 2017 to retain the state's standards, he said. Those rules mirror the Obama EPA requirements through MY25.

Those remarks suggest that -- at least publicly -- California and EPA could be headed toward a major clash on the issue that could lead to contentious legal battles over both the standards and the state's ability to develop and enforce its own standards.

At the auto show, Wehrum pledged to release EPA's revised determination about whether its current MY22-25 rules should be changed by April 1, and officials have said that announcement would be coordinated with a separate DOT proposal for its fuel economy standards for those years.

If the agency determines its current rules should be changed -- as most expect it to do -- any subsequent revisions would be done “very expeditiously,” he said.

He also said that the agency's review is an "engineering exercise" that would produce a “range of possible alternatives,” allowing officials to “pick from that range.” “It's a very high priority of mine
. . . to ground what we’re doing in good engineering and good science, and we fully intend to do that,” he said.

During brief remarks to reporters after the event, Wehrum also downplayed a request from automakers that EPA should jettison its models used to craft the standards and instead rely solely on DOT’s model, which they view as less speculative. However, he suggested EPA might still change the key inputs to its models. “What my own technical staff has said is there are a variety of models you can use on these things, and as long as you do the modeling right, you should get results that can be relied on,” he said. “What’s really important is whatever model we use, we want to make sure we do it right.”

Wehrum also told the event that the agency's rules should give “appropriate credit” to electric vehicles’ (EV) emissions, a reference to an existing regulatory provision that assigns no emission credit to such vehicles through MY21, even though electricity used to power the vehicles produces varying levels of GHGs.

After that point, the rules assign some level of emissions to the vehicles based on power sector GHGs, though automakers have called on the zero-credit provision to be extended to spur the adoption of EVs.

**Can California Beat Trump in the Fight over Vehicle Emissions?**

California Governor Jerry Brown recently signed an executive order that, among other things, sets a new target for the number of zero-emissions vehicles (ZEVs) the state wants to see on California roads and highways by 2030. The previous target of 1.5 million ZEVs by 2025 has been raised to 5 million and a new target date of 2030 has been set.

To support that lofty goal, the governor also proposed an eight-year initiative to continue offering the state’s vehicle rebates and to boost investment in infrastructure to support ZEVs. The proposal calls for the state to spend $2.5 billion to help bring 250,000 vehicle charging stations and 200 hydrogen fueling stations to the state by 2025.

This executive order aims to curb carbon pollution from cars and trucks and boost the number of zero-emission vehicles driven in California. In addition, the cap-and-trade investments will, in varying degrees, reduce California’s carbon footprint and improve the quality of life for all.

The auto industry has sought help from the Trump administration to relax national emissions rules for the period between 2022 and 2025. But more than that, perhaps, automakers want California and the rest of the country to be on the same page. The state is the country’s largest market for new cars and conflicting carbon emissions rules generate a significant headache for car makers.

California wants to incentivize consumers to choose cleaner vehicles which, in turn, would incentivize automakers to build more of them and fewer high-margin pickups and SUVs. That’s a tough sell to the business-friendly Trump administration and, perhaps, an even tougher sell to U.S. consumers.

**California Unveils Final Truck GHG Rules, Setting Up another Clash With EPA**

California air board officials have unveiled their final proposed greenhouse gas standards for medium- and heavy-duty trucks and trailers, which include new provisions to counter EPA efforts
to weaken or repeal federal regulations for trailers and to remove requirements for so-called “glider” trucks.

The California Air Resources Board (CARB) December 19 released its proposed GHG “emission standards for medium- and heavy-duty engines and vehicles and proposed amendments to the tractor-trailer GHG regulation.”

The rules in large part echo EPA’s current Phase 2 GHG standards for the vehicles that were adopted in 2016, but officials made additions in recent months to counter pending Trump EPA proposals to repeal rules pertaining to trailers and glider kits, which are truck tractors that combine used engines with a new chassis and cab.

CARB’s adoption of the regulations -- currently scheduled to take place at a February 8-9 meeting -- would effectively establish de facto federal standards for heavy-duty tractors even if EPA weakens or repeals its regulation because manufacturers are unlikely to build one type of engine for sale in California and another for sale in the rest of the country.

Trailer manufacturers would likely oppose the new CARB regulations if they would force companies to build two different models -- one intended for sale in California that complies with CARB’s rules mirroring EPA’s current standards, and another for sale in the rest of the country. However, CARB in the new proposal maintains compliance for the trailer requirements on fleet owners and not manufacturers, which may serve to ease or eliminate the manufacturers’ concerns.

Manufacturers of glider vehicles could also raise objections to CARB’s new proposal. EPA last month proposed to scrap GHG standards for gliders that were included in the Phase 2 rule. The Trump EPA says the agency lacked legal authority to regulate the vehicles because they are not “new” motor vehicles as defined by the Clean Air Act.

EPA is also reconsidering the trailer portions of the Phase 2 rule, amid industry claims that trailers are not “self-propelled” vehicles subject to regulation.

The broader trucking sector has opposed the agency’s efforts to alter the glider and trailer provisions, arguing that the rule was a carefully crafted compromise that attracted broad industry and environmentalist support.

CARB’s “Initial Statement of Reasons” (ISOR) document for the new regulatory proposal notes that it will “amend requirements for glider vehicles, glider engines, and glider kits.”

The bulk of CARB’s proposal aligns with the final federal Phase 2 regulations adopted by the Obama EPA last year, including emission standards and other requirements for heavy-duty glider vehicles, glider engines, and glider kits, the ISOR says. The provisions are intended to close an “unintended emission standards loophole and curtail criteria pollutant increases that occurred after implementation of the 2007/2010 heavy-duty engine emissions standards.”

Regarding trailers, CARB clarifies that the new rules would take effect in model year 2020 and allow trailer fleet owners the option of either purchasing Phase 2 certified trailers or installing Phase 2 approved aerodynamic technologies and low-rolling resistance tires to comply. This appears to mean that the CARB regulation will continue the state’s practice of requiring compliance from fleet owners and not from manufacturers to build trailers intended for sale in the state to meet the current federal Phase 2 standards, as previously considered.
Another significant requirement in the CARB proposal that is different from the current federal Phase 2 rules is that staff will independently verify heavy-duty engine certification information, based in part on concerns that the Trump administration cannot be trusted to carry out this process adequately. To certify to California’s Phase 2 regulations, manufacturers would be required to submit certification documents directly to CARB. Staff would then independently review the documents before issuing an executive order approving the use of the engine, the ISOR says.

A new EPA report shows that criteria pollution from a popular configuration of "glider" trucks -- which combine a new heavy-duty chassis with used engines -- can vastly exceed emissions from new trucks, contrasting with industry and agency suggestions that its plan to repeal glider vehicle greenhouse gas limits would result in minimal pollution increases.

EPA recently held a public hearing on the planned glider standards repeal and heard from some industry groups that are opposed to finalizing the repeal. The objections, aired at a December 4 public hearing at EPA headquarters on the glider proposal, built upon prior concern by environmentalists, public health groups and state and local regulators that EPA's own testing and other data show steep increases in emissions of particulate matter and nitrogen oxides that would result from implementing the proposal:

32. Engine Makers Urge EPA To Move Ahead with New Heavy-Duty NOx Rules

Truck and engine makers are pressing EPA to move forward with a regulation to further reduce nitrogen oxides (NOx) from heavy-duty trucks, seeking to ensure a national program as an alternative to what the sector fears would be a less-flexible program from California. The public plea comes as EPA officials are still formally hedging on states and environmentalists' request for ultra-low emissions controls, though the agency is acknowledging the requests and is hinting that regulation is likely.

In response to those requests, the Obama EPA in December 2016 agreed to write a regulation that would take effect in model year 2024, however the rule's status under the Trump administration has been murky.

The manufacturers' recent plea also urges any forthcoming rules to not make it more difficult for the industry to meet existing heavy-duty truck greenhouse gas regulations -- a request that could be advocacy for a relatively weaker NOx limit than what California has pushed for.

“We actually believe that the EPA should regulate the industry," Truck and Engine Manufacturers' Association (EMA) President Jed Mandel said at a January 26 SAE International event in Washington, D.C. “There should be a new heavy-duty, on-highway, low-NOx rule, national in scope.” He added, “We definitely want EPA to take the lead in developing the new nationwide rule. Clearly California has a role to play.” His group hopes for an EPA proposal sometime in 2019.

The remarks come as the California Air Resources Board (CARB) has indicated plans to move forward with its own heavy-duty NOx rule that could lower tailpipe emissions to 0.02 grams per brake horsepower hour, a level the state says is needed to address its air quality problems.

But EPA officials recently acknowledged both the industry push for new heavy-duty NOx rules and the interest by states and environmentalists in the issue -- remarks that appeared to indicate
EPA move is likely. “There’s not much I can say about this because everything we’re doing is a work in progress,” EPA air chief Bill Wehrum said in January 25 remarks at the Washington Auto Show. But, “one thing I’ve heard loud and clear from our co-regulators, such as those from California, we’ve heard loud and clear from the manufacturers of heavy-duty on-road trucks, is they have a real interest in us taking a look at the current regulations and thinking about whether they should be revised and updated.”

Wehrum added that the industry push for EPA regulations on the issue is “unique to me. It’s not often the regulated industry comes to me and says, ‘Will you please regulate me.’ But the industry has done that and said, ‘These standards have been in place for a long time, and you should take a look at them periodically and as appropriate adjust them.’”

EPA’s transportation and air quality chief Chris Grundler offered similar themes in January 26 remarks during a plenary session at the SAE International event. Grundler noted that Wehrum has spoken to officials in California and other states who are seeking further NOx cuts. “We have done some technical work, we are monitoring the work in California, so no decision has been made yet as to will EPA pursue a new national rule” to cut heavy-duty truck NOx emissions, he said.

He added that “our co-regulators and industry deserve an answer to this request and will be getting one soon.”

EPA’s Brian Nelson during another presentation at the SAE International event referenced prior comments from EPA Administrator Scott Pruitt that nearly half of the country remains in non-attainment for air quality, and his accompanying presentation included a map of specific geographic areas where NOx from heavy-duty trucks remains a problem.

Mandel during his remarks outlined several principles consistent with what EMA wants to see in any NOx regulation, while suggesting that its requirements should take effect between 2024 and 2027 -- a timeline later than what CARB has been seeking. These are:

- EMA seeks a “data-driven” rule that achieves “real-world” NOx cuts; that it be a route to cheaper compliance without harming environmental performance; and that the rule should maintain the cost-effectiveness and feasibility of the current GHG and fuel efficiency standards.
- He also argued that there is “an inherent tradeoff between reducing NOx and achieving” GHG cuts and improved fuel efficiency. California officials have pushed back on this notion, arguing that some technologies can be implemented to reduce emissions of both NOx and GHGs.
- The Obama EPA’s December 2016 memo pledging to write a low-NOx standard stated that there have been “numerous advances in exhaust after-treatment technologies that demonstrate where GHG reductions and fuel efficiency do not have to be sacrificed to achieve greater NOx reductions.” However, EPA at that time declined to “commit to a particular level or form” of a standard, despite CARB’s calls for a 0.02 gram per brake horsepower hour limit.
- Mandel also said the sector needs “sufficient lead time” to implement the rule, and that the standard should allow the industry to produce “reliable products that can be sold nationwide.”
The rule should also be “technology neutral,” recognize “diversity” in the heavy-duty truck marketplace and take advantage of opportunities to optimize existing technology in ways that are not necessarily well recognized in today's test cycle.

Mandel contrasted the national approach his sector is hoping for with current CARB plans for a rule that would result in a "piecemeal approach." Specific concerns include that the state is “substantially focused on simply reducing tailpipe emissions” without looking at duty cycles, and that CARB is moving forward with a separate rulemaking related to truck warranties. “Without looking at where excess NOx emissions are coming from, without looking at duty cycles, we think simply lowering the tailpipe standard will not achieve real-world reductions,” he said. “They are [also] moving forward with a warranty rulemaking, they are talking about changing useful life provisions.”

He added: “These are all things we are willing to work on. . We are willing to engage with CARB and EPA, we think they should look at it in the context of what the future low-NOx rulemaking is going to be and do it as a collective whole.”

33. CARB Approves $663 Million Funding Plan for Clean Vehicles

The California Air Resources Board has approved a $663 million low-carbon transportation plan to increase the use of clean cars, heavy-duty trucks, buses and freight equipment. The funding will help the state cut climate-changing gases while promoting technologies that reduce harmful diesel emissions, particularly in disadvantaged and low-income communities. “This investment will continue to drive the market for new vehicle technologies and put more ultra-clean and zero-emission trucks, buses and cars into the communities across California that need them the most.” CARB Chair Mary D. Nichols said.

The plan allocates $398 million to incentivize clean heavy-duty trucks, buses and freight projects, including $190 million for advanced-technology freight equipment such as yard trucks, forklifts and cranes. Most of funding for the Fiscal Year 2017-18 plan comes from California’s cap-and-trade auction proceeds.

While diesel trucks account for only 2 percent of vehicles in the state, they emit most of the smog-forming pollution, and two-thirds of all diesel soot. 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.

There are now more than 20 manufacturers offering 60 eligible models of hybrid, low-NOx, and zero-emission trucks and buses — companies like BYD, Complete Coach Works, Efficient Drivetrains Inc., El Dorado, Gillig, Motiv Power Systems, New Flyer, Proterra and TransPower. The overall number of companies involved in building clean trucks and buses in California has been growing rapidly over the past several years.

The plan continues CARB’s efforts to put more clean vehicles in disadvantaged communities, while promoting technologies that can reduce harmful effects of fossil fuel emissions across California. Investments range from supporting increased numbers of zero-emission heavy-duty trucks and buses, and zero- and near zero-emission freight facilities, to rebates for the cleanest passenger cars.

Heavy-Duty Vehicles and Off-Road Equipment
• $188 million to promote the sale of clean trucks and buses through voucher incentives, driving the continued deployment of hybrid, low-NOx, and zero-emission trucks and buses.
• $190 million for advanced-technology freight-related investments that will bring the cleanest vehicles and equipment to California’s most impacted communities, transportation corridors and freight hubs.
• $20 million to make loans for clean trucks more widely available.

**Passenger Vehicles and Transportation Equity**

• $140 million to the Clean Vehicle Rebate Project, which offers up to $5,000 in vehicle rebates for the purchase or lease of new, eligible zero-emission and plug-in hybrid vehicles.
• $125 million to transportation equity projects focused on disadvantaged communities and low-income consumers. These include programs to scrap and replace older vehicles with up-to-date clean cars, cleaner school buses, and more electric car-sharing projects in disadvantaged communities.

California has set ambitious goals to reduce climate-changing gases, improve air quality, and reduce petroleum dependency. To meet these goals, CARB uses incentives to speed up development and early commercial deployment of technologies for the cleanest cars and trucks.

Investments are designed to maximize benefits for disadvantaged communities and low-income communities and households. Projects, for example, help lower-income residents living in areas of California affected most by air pollution afford the cleanest cars.

While the incentive funding largely comes from the state’s cap-and-trade program, other funding is provided by the state’s Air Quality Improvement Program, the Volkswagen diesel emissions cheating scandal settlement and the new Zero- and Near-Zero Emission Warehouse Program.

These investments support the emission reduction goals of the California's 2017 Climate Change Scoping Plan, State Implementation Plans and the California Sustainable Freight Action Plan.

Eleven years ago, the Global Warming Solutions Act (AB 32) set the goal of reducing GHG emissions to 1990 levels by 2020. California is on track to exceed that target. The 2017 Scoping Plan sets the state on a very ambitious course to reduce climate-changing gases an additional 40% below 1990 levels by 2030. This will require California to double the rate at which it has been cutting climate-changing gases.

California GHG emissions and emission reduction targets [2017 Scoping Plan]
The Scoping Plan addresses the major sources of GHG emissions from various sectors of the economy:

- **More Clean Cars and Trucks:** The plan sets out programs to incentivize the sale of zero-emission vehicles, drive the deployment of zero-emission trucks, and shift to a cleaner system of handling freight statewide.

- **Increased Renewable Energy:** California’s electric utilities are on track to meet the requirement that 33% of electricity come from renewable sources by 2020. The Scoping Plan guides utilities to 50% renewables by 2030.

- **Slashing Super-Pollutants:** The plan calls for reductions in emissions of super-pollutants such as methane and HFC refrigerants, which are responsible for as much as 40% of global warming.

- **Cleaner Industry and Electricity:** California’s renewed cap-and-trade program extends the declining cap on emissions from utilities and industries and the carbon allowance auctions.

- **Cleaner Fuels:** The Low Carbon Fuel Standard will continue to require that renewable transportation fuels increasingly replace fossil fuels.

- **Smart Community Planning:** Local communities will continue developing plans to reduce emissions through more sustainable transportation and housing policies.

- **Improved Agriculture and Forests:** The Scoping Plan also outlines programs to account for and reduce emissions from agriculture, forests and other natural lands.

### California carbon emissions [2017 Scoping Plan]

Transportation contributes 39% of California climate-changing emissions. The adopted low-carbon transportation plan includes a range of incentives that range from supporting increased numbers of zero-emission heavy-duty trucks and buses, and zero- and near zero-emission freight facilities, to rebates for the cleanest passenger cars:

34. **Governor Brown Aims to Boost California’s Leadership on Electric Cars**

California has long been seen a leader on EVs of all kinds – plug-in hybrids, battery electric and fuel cell vehicles. The state established the first requirements for zero emission vehicles in 1990 and has been pushing the industry forward ever since. According to a new report1 as of October 2017, the state has 337,482 zero-emission vehicles (ZEV). While that only makes up 4.5 percent of the state’s total vehicle fleet, that number grew 53 percent between 2013 and 2017. It’s far outpacing the total electric vehicle percentage in the United States as a whole, 1.1 percent, and

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China, 1.8 percent, cementing California’s status as a world leader. It’s also giving the state more of a fighting chance to make its emissions reduction targets, since transportation accounts for roughly 40 percent of the state’s carbon emissions. Reduction. On January 26th, Governor Brown issued a new executive order which gives another jolt to EV deployment in the state with a call for $2.5 billion in investments in infrastructure and consumer incentives over the next 8 years with the aim of reaching 5 million zero emissions vehicles by 2030 and the build out of 250,000 charging stations and 200 hydrogen refueling stations by 2025.

Battery costs, the most expensive part of any electric vehicle, have reportedly fallen 74 percent since 2010, and continued increases in battery range, such as the 200-mile plus range of the Chevy Bolt and 300-plus mile range of the Tesla Model 3, have helped calm range anxiety. Another study included in the NEXT10 report shows the lifecycle costs of EVs have also gotten to the point where it’s comparable with gas-powered cars.

Right now, California has 16,549 public and nonresidential private-sector charging outlets, more than any other state in the nation, but still just 0.05 outlet per ZEV, one of the lowest rates in the country.

35. Median All-Electric Vehicle Range Grew Substantially from Model Year 2011 to 2017

In model year 2011, there were just three different models of all-electric vehicles (AEV) available and their ranges on a full charge (according to the Environmental Protection Agency) spanned from 63 to 94 miles. By model year 2017, the number of AEV models increased to 15 and the available ranges expanded as well, from a minimum of 58 miles for the smart for two Electric Drive Coupe to a maximum of 335 miles for the Tesla Model S 100D. From 2011 to 2017, the median of the AEV ranges increased by 41 miles – from 73 to 114 miles.²

36. US EPA Finalizes 2018 RFS Volumes, Upholds the RFS Point of Obligation

The US Environmental Protection Agency (EPA) finalized the required renewable fuel volumes under the Renewable Fuels Standard (RFS) program for 2018, and biomass-based diesel for 2019. The final standards for 2018, and for biomass-based diesel for 2019, have been slightly increased from the proposed standards issued earlier this year. Even though the change is small,

it carries a stronger political signal—while the proposed standards were lower than the 2017 RFS volumes, the final standards are marginally higher (except for cellulosic biofuel) than the 2017 standards.

### Final Renewable Fuel Volume Requirements For 2017-2019

<table>
<thead>
<tr>
<th>Category</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellulosic biofuel (million gallons):</td>
<td>311</td>
<td>288</td>
<td>n/a</td>
</tr>
<tr>
<td>Biomass-based diesel (billion gallons):</td>
<td>2.0</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Advanced biofuel (billion gallons):</td>
<td>4.28</td>
<td>4.29</td>
<td>n/a</td>
</tr>
<tr>
<td>Renewable fuel (billion gallons):</td>
<td>19.28</td>
<td>19.29</td>
<td>n/a</td>
</tr>
</tbody>
</table>

In a separate decision, the EPA denied requests from petitioners to initiate a rulemaking to change the point of obligation for compliance under the Renewable Fuels Standards program. Under the current RFS regulations, fuel refiners and importers are responsible for compliance and must ensure that the minimum required RFS volumes are blended into commercial gasoline and diesel fuels sold in the United States. The EPA received petitions from the American Fuel and Petrochemical Manufacturers (AFPM) and from other fuel industry groups and companies that requested to have the point of obligation shifted downstream from refiners and importers. Some of the petitioners requested that EPA shift the point of obligation from refiners and importers to those parties that blend renewable fuel into transportation fuel. Others suggested that it be shifted to those parties that hold title to the gasoline or diesel fuel immediately prior to the sale of these fuels at the terminal (“position holders”) or to “blenders and distributors”.

In its response, the EPA said the petitioners have not demonstrated that shifting the point of obligation would improve the effectiveness of the program. Furthermore, a change in the point of obligation would unnecessarily increase the complexity of the program and undermine the success of the RFS program because of increasing instability and uncertainty in programmatic obligations.

### 37. Tax Bill Boosts Oil, Gas Drilling and Renewable Energy

The Republicans' tax package will boost traditional forms of energy such as oil and gas while also supporting renewable energy such as wind and solar power — and even extend a hand to buyers of electric cars. The agreement by House and Senate negotiators will preserve tax credits for wind power and other clean energy. The bill also would extend a tax credit of up to $7,500 for purchases of plug-in electric vehicles such as the Tesla Model 3 and Chevrolet Bolt.

The wind-energy credits are popular with some Republicans, including Iowa Sen. Chuck Grassley and South Dakota Sen. John Thune, who worked to defend them after they were curtailed in a version passed by the House.

Electric cars comprise just about 1 percent of sales nationwide, but several states have mandates that such "zero emission vehicles" make up a much larger portion of vehicle sales. Manufacturers worry that eliminating the tax credit would have made those targets virtually impossible to meet.

### 38. U.S. Said to Seek Major Fines, Recalls in Fiat Settlement

The U.S. Justice Department has offered to settle its emissions-cheating lawsuit against Fiat Chrysler Automobiles NV if the carmaker recalls 104,000 vehicles and pays a substantial but unspecified civil penalty. The proposed framework of an offer was extended to the Italian-American automaker recently and included steps it would have to take to mitigate its past pollution
and internal changes to prevent future violations of environmental rules, according to a copy of the settlement offer obtained by the press.

The settlement “must include very substantial civil penalties” large enough to deter future violations and that “adequately reflect the seriousness of the conduct that led to these violations,” Justice Department lawyers wrote in a January 27 letter to Fiat Chrysler attorneys.

Reaching a final settlement would resolve civil violations of clean-air regulations laid out in a complaint filed May 23. The Justice Department said Fiat Chrysler had used illegal software to pass laboratory emissions tests while permitting its diesel vehicles to exceed pollution standards while on the road.

The proposed settlement doesn’t include an end to a criminal investigation into the automaker by the Justice Department related to diesel emissions.

The civil complaint was filed in federal court on behalf of the Environmental Protection Agency and the California Air Resources Board and alleged violations of the Clean Air Act.

A recall fix would have to bring all its vehicles into full compliance with emissions standards, according to the Justice Department letter. The case involves diesel-powered Jeep Grand Cherokee SUVs and Ram 1500 pickups from model years 2014-2016 that regulators allege were sold with emission software that violated U.S. clean air rules.

Unlike Volkswagen, Fiat Chrysler has steadfastly denied intentional wrongdoing. Sergio Marchionne, the company’s chief executive, was outraged when the EPA brought its initial notice of violation against the automaker last year, calling the allegations “unadulterated hogwash.”

The settlement letter cites “compelling evidence” that Fiat Chrysler knew or had reason to that the vehicles did not comply with clean air rules and that the company misled regulators, calling the conduct “egregious.”

“We are engaging in conversations, but I’m not involved in the settlement talks,” Mary Nichols, chair of the California Air Resources Board, said at a February 2 event in Palo Alto. “It’s interesting that Fiat Chrysler has the same team of lawyers representing them that worked with VW. “

39. Volkswagen Supplier Facing Criminal Case in Emissions Fraud

A supplier for Volkswagen AG is in discussions with the U.S. Justice Department to resolve an impending criminal case arising from its alleged participation in the German auto giant's emissions cheating as federal prosecutors maintain pressure on automotive companies for environmental violations. IAV GmbH, an engineering company based in Berlin, is expected in the coming months to face allegations that it aided Volkswagen in the auto maker’s nearly decade long conspiracy to rig diesel-powered vehicles with illegal software that allowed them to dupe U.S. government emissions tests and then pollute far beyond legal limits on the road, according to reports.

The supplier is currently negotiating a settlement with federal prosecutors and has argued it has limited resources to address any potential financial penalties as part of the case.

A Justice Department spokeswoman said in a statement: "While we cannot confirm or deny the existence of an investigation, the Justice Department is committed to holding both corporations
and individuals accountable to the rule of law, and to protecting U.S. consumers and the environment."

Federal prosecutors and regulators have continued to pursue other automotive firms for alleged emissions transgressions. The Justice Department sued Fiat Chrysler Automobiles NV in a civil case in May that accused the Italian-U.S. auto maker of using illegal emissions-cheating software, similar to the kind Volkswagen employed. The company allegedly installed the software in roughly 104,000 2014-2016 model-year Ram pickup trucks and Jeep Grand Cherokee sport-utility vehicles with diesel engines. The auto maker is in settlement discussions with regulators and customers and expects to be able to soon fix vehicles to address officials' concerns, lawyers have said in court proceedings.

Fiat Chrysler and Daimler AG's Mercedes-Benz, meanwhile, are both under criminal investigation in the U.S. for alleged emissions violations, as is Robert Bosch GmbH, which provided components Volkswagen used in its emissions cheating. Both Fiat Chrysler and Daimler have denied using defeat devices, the type of illegal emissions software Volkswagen used. A Bosch spokeswoman said the supplier takes allegations of manipulating diesel software "very seriously" and is cooperating with investigations and defending itself in civil litigation.

IAV, meanwhile, was referred to in an earlier indictment of a Volkswagen engineer who received a 40-month prison sentence after pleading guilty to helping the auto maker evade emissions requirements. IAV reportedly is "Company A," an unnamed firm referenced in the indictment that allegedly worked with the engineer to create defeat devices for Volkswagen, these people said.

In November 2006, a "Company A" employee submitted a request on Volkswagen's behalf for a software design change "that would become the defeat device," the indictment alleged. Volkswagen owned 50% of the company's shares and was its largest customer at the time of the June 2016 indictment, according to court documents.

40. Ex-VW Exec Schmidt Gets 7 Years, $400,000 Fine for U.S. Emissions Violations

Oliver Schmidt, the former high-ranking executive who spearheaded Volkswagen's multiyear efforts to keep its conspiracy to cheat on diesel emissions a secret from U.S. regulators and failed to cooperate with investigators, received the maximum sentence possible from a federal judge in Detroit. Schmidt, 48, was sentenced to seven years in prison and a $400,000 fine by U.S. District Judge Sean Cox. In August, he pleaded guilty to two felony charges of conspiracy to defraud the United States and violating the Clean Air Act. A third charge of aiding and abetting wire fraud was rolled into the conspiracy charge in a plea agreement.

Cox agreed to allow Schmidt to continue to serve his sentence at the federal penitentiary in Milan, Michigan, where he has been behind bars since March. As part of the sentence, Schmidt will get credit for the nearly 11 months that he has so far been incarcerated.

Schmidt, the former general manager of Volkswagen's U.S. Environment and Engineering Office in suburban Detroit, has been in custody since his arrest in January while attempting to return to Germany from a family vacation in Florida. His efforts to secure release on bail prior to his plea were rebuffed by Cox, who called him a "flight risk," a decision that was later upheld on appeal.

Schmidt is one of eight current or former Volkswagen engineers or executives charged in Volkswagen's global conspiracy to cheat on diesel emissions. However, only one other Volkswagen employee, engineer James Liang, has thus far faced justice. Liang, who, unlike
Schmidt, cooperated early on with investigators, was sentenced by Cox in late August to 40 months in prison -- longer than was sought by prosecutors -- in part, Cox said, because he was aware that he had to sentence Schmidt this month.

Cox said Schmidt was a central figure to the conspiracy. "In my opinion ... you are a key conspirator responsible for the cover-up in the United States of this massive fraud perpetrated on the people of the United States," the judge said. "I'm sure, based on common sense, that you viewed this cover-up as your opportunity to shine. That your goal was to impress senior management to fix this problem, to make yourself look better, to increase your opportunities to climb the corporate ladder at VW."

Cox said Schmidt was "a significant player" in VW's actions, which undermined the trust between buyer and seller in the U.S. economy.

"You knowingly misled and lied to government officials. You actively participated in the destruction of evidence. You saw this massive cover-up as an opportunity ... to advance your career at VW. This conspiracy, which you were a key part of, in particular the cover-up, is a very troubling crime against our economic system. It attacks and destroys the very foundation of our economic system, the trust by the buyer of our economic system," Cox said.

Before his sentence, a nervous, tearful Schmidt choked up several times while reading a letter to the court accepting responsibility for his actions. He thanked his family and friends for supporting him and said he has not been able to sleep at all while awaiting his sentencing. He also admitted that he had tried to use his personal relationships in the U.S. to keep regulators in the dark.

"For the disruption of my life, I only have to blame myself," Schmidt said. "I justified my decisions by telling myself that I was obliged to speak for my superiors. The man that stands before you today no longer believes that."

Schmidt admitted that his remorse was of little use now: "I'm deeply sorry for the wrongs I've committed, and I'm as ready as I'll ever be to accept my punishment now."

In a letter to Cox last week, Schmidt said he first learned about the company's emissions-testing evasion scheme in summer 2015. Schmidt said he was given "a script, or talking points" approved by VW management and "high-ranking lawyers" to follow when he met with California environmental official Alberto Ayala on Aug. 5, 2015.

"Regrettably, I agreed to follow it," Schmidt wrote. "In hindsight, I should have never agreed to meet with Dr. Ayala on that day. Or, better yet, I should have gone to that meeting, ignored the instructions given to me" and admitted "there was a defeat device in VW diesel engine vehicles and that VW had been cheating for almost a decade."

But Schmidt's own emails -- recovered prior to his surprise arrest in January -- point to his sounding alarm bells within the company up to a year earlier. In April 2014, Schmidt was notified that independent testing at West Virginia University had discovered that VW diesel vehicle emissions vastly exceeded federal standards.

Investigators say he sounded the alarm bells within the automaker the same day, writing to a colleague: "It should first be decided whether we are honest. If we are not honest, everything stays as it is."
More than six weeks later in 2014, Schmidt took his growing problem up the company ladder, writing an email to the head of Volkswagen of America noting the economic risks to the company, and the possibility of an indictment.

In a pre-sentence filing, Schmidt had sought a sentence of 40 months of supervised release and a $100,000 fine.

Before the sentencing, Schmidt's attorney, David DuMouchel, argued that his client's sentence should be less than that of Liang, saying that Liang had been involved in the conspiracy from the beginning in 2006 and through the whole conspiracy, while Schmidt was only involved for two months "at the very end."

"Mr. Schmidt was asked, at the very end, to conceal from regulators the existence of the defeat device. And he did it," DuMouchel said, adding that his client now wishes that he had not lied to California regulators in August 2015, which he implied was Schmidt's worst day. "I wouldn't want anybody to judge me on my worst day."

But prosecutor Ben Singer argued that Schmidt was key to keeping the conspiracy under wraps, that he deleted evidence, and that he had directly briefed VW CEO Martin Winterkorn in July 2015 about the cover-up and was ordered to lie to keep the defeat device secret and carried out that order. "He was in the room, and every time he was in the room, he chose to lie. And that's how this crime happened," Singer said.

Volkswagen earlier this year pleaded guilty before Cox to a felony for its diesel emissions scandal, which has now cost the automaker as much as $30 billion.

41. Vehicle Catalyst Manufacturers Seek EPA Air Policy Overhaul

Makers of catalytic converters and some states are lobbying EPA to overhaul its policy on vehicle aftermarket converters to ease restrictions on sale of the emissions control technology, which they say will reduce prices of the devices, clean the air and compete with cheap and possibly illegal imports.

In a November 15 letter to EPA Administrator Scott Pruitt, four U.S. manufacturers of aftermarket converters ask EPA to update what they say is an outdated 1986 national standard for their product. They want the agency to establish a new national standard that is less onerous to comply with than tough California standards now being emulated around the country. Aftermarket converters are made by companies other than the original car manufacturer and used in older vehicles where the original converter has failed.

AP Emissions Technologies, Davico Manufacturing, MagnaFlow and Tenneco say, “The absence of official guidance and acknowledgement of technological change is beginning to create a web of differing state regulations and will likely encourage the import of substandard product from overseas.”

The companies complain of “an overly complex and difficult process of certifying our converters after they are built to meet the standards adopted by the California Air Resources Board (CARB),” which is further exacerbated by additional requirements imposed by California by executive order. The process “severely limits the number of approved converters available for purchase.”
As more states adopt the CARB process, consumers are increasingly being forced to buy very expensive converters from original equipment manufacturers that can cost up to three times as much as an aftermarket product, the groups say.

Hoping to appeal to the Trump administration’s “America first” trade policy, the groups say, “Continued inaction from the EPA likely will encourage the illegal use of foreign-made converters” that do not meet regulatory standards.

42. Black, Hispanic And Poor Students Most at Risk from Toxins – Study

Schoolchildren across the US are plagued by air pollution that’s linked to multiple brain-related problems, with black, Hispanic and low-income students most likely to be exposed to a fug of harmful toxins at school, scientists and educators have warned. The warnings come after widespread exposure to toxins was found in new research using EPA and census data to map out the air pollution exposure for nearly 90,000 public schools across the US.

“This could well be impacting an entire generation of our society,” said Dr. Sara Grineski, an academic who has authored the first national study, published in the journal Environmental Research, on air pollution and schools.

Grineski and her University of Utah colleague Timothy Collins grouped schools according to their level of exposure to more than a dozen neurotoxins, including lead, mercury and cyanide compounds. The research found that:

- Only 728 schools achieved the safest possible score.
- Five of the 10 worst polluted school counties have non-white populations of over 20%
- The five worst polluted areas include New York, Chicago and Pittsburgh, as well as Jersey City and Camden in New Jersey. One teacher in Camden told the Guardian that heavy industry was “destroying our children”.

Cash-strapped authorities have routinely placed schools on the cheapest available land, which is often beside busy roads, factories or on previously contaminated sites.

The study found that pre-kindergarten children are attending higher risk schools than older students – a stark finding given the vulnerability of developing brains.

Pollution exposure is also drawn along racial lines. While black children make up 16% of all US public school students, more than a quarter of them attend the schools worst affected by air pollution. By contrast, white children comprise 52% of the public-school system but only 28% of those attend the highest risk schools. This disparity remains even when the urban-rural divide is accounted for.

Schools with large numbers of students of color are routinely located near major roads and other sources of pollution, with many also grappling with other hazards such as lead-laced drinking water and toxins buried beneath school buildings.

Grineski said there were a range of consequences. “We’re only now realizing how toxins don’t just affect the lungs but influence things like emotional development, autism, ADHD and mental health,” she said. “Socially marginalized populations are getting the worst exposure. When you look at the pattern, it’s so pervasive that you have to call it an injustice and racism.”
The research is “important and is consistent with other localized information we’ve seen over the years,” according to Stephen Lester, science director of the Center for Health, Environment and Justice, who wasn’t involved in the study. “Children are facing risks that will affect their ability to learn,” he said. “It’s a serious problem that needs a serious government response.”

As scientists have pieced together evidence showing the link between air toxins and neurological harm, American cities are still largely wedded to a legacy that has juxtaposed certain neighborhoods with heavy traffic and hulking industry.

Only a handful of states require that schools are not placed next to environmental hazards. In 2010, the EPA issued national guidelines on picking school locations but backed away from imposing mandatory buffer zones.

ASIA-PACIFIC

43. Beijing Achieves Five-Year Air Quality Target

Beijing successfully met its air quality improvement targets as outlined by the national 2013 Air Pollution Action Plan. Beijing’s PM2.5 level for 2017 was 58 micrograms per cubic meter, just below the 60-microgramme target. It dropped 20.5% from the previous year and 35.6% from 2013. This year’s aggressive campaign to decrease the use of coal for heating, and years of efforts to retire polluting vehicles and shutdown or relocate polluting factories led to the city’s success. The Ministry of Environmental Protection also said that favorable weather conditions over the past few months helped push the city over the finish line.

Beijing’s air quality improvement was just one part of the broader air action plan that targeted key regions and sought to reduce PM10 air pollution by 10% in all major cities among other goals.

China has made heavy investments to replace coal fired heating plants with that of natural gas to reduce air pollution in the country. The pollutions levels in the city dropped this year as Beijing phased out more than 4,450 coal-fired stoves in 2017, reducing the capital city's coal consumption by nearly three million tons, local authorities said. The move also reduced emissions of 5,500 tons of smoke and 6,600 tons of sulfur dioxide, the Beijing Municipal Environmental Protection Bureau said.

As part of a campaign launched in 2013, Beijing has phased out about 99.8 per cent of coal-fired stoves in the city. Natural gas and other forms of clean energy are used to replace coal.

The BEPB is very proud that they successfully achieved their 2017 target of a 30% reduction in PM2.5 levels from 2013. During the period from 2013 to 2017, they retired (scrapped) approximately 2.5 million old, dirty vehicles, tightened emissions and fuel quality standards several times, tightened their low emissions zone, created a new low emissions zone for construction equipment and stopped the use of trucks travelling through Beijing to carry coal to the port of Tianjin; these trucks have been replaced by rail. Only trucks that are China 3 or cleaner and construction equipment that is Beijing 3 or better can be used in Beijing.

Environmental monitoring results show that Beijing’s average sulfur dioxide density, a major air pollutant, was 8 micrograms per cubic meter towards the end of October 2017, compared with the annual average density of 28 micrograms in 2013.
Small stoves in Beijing’s suburban and rural areas, not covered by the central heating system, had been blamed for worsening the city’s smog during the winter. Beijing completed 338 projects to switch coal-fired heating to heating fueled by natural gas in rural areas this year, involving 8.5 billion yuan (USD 1.3 billion) of investment, state-run Xinhua news agency reported.

44. Beijing’s Struggle Against Pollution Will Be Tough, Take Time: Mayor

Beijing’s battle against air pollution will take time and be very tough to win despite recent improvements, the acting mayor of China’s capital said recently. The city has been fighting to clean its notoriously smoggy air through steps such as pushing households and factories to switch away from coal to cleaner fuels like natural gas. “Further improvement in air quality (will be) extremely difficult,” acting mayor of Beijing, Chen Jining, said in a statement released during the city’s congress meeting.

The central government’s intense focus on air quality means many local officials’ careers are linked to the success of efforts to tackle smog, making it unusual to speak candidly about the challenges of meeting tough targets.

Beijing has chalked up a short-term success by cutting the annual average level of breathable particulate matter (PM2.5) to 58 micrograms per cubic meter in 2017, beating a target set by the State Council in 2012. However, the city is still some way from reaching its official PM2.5 standard of 35 micrograms and the recommended level of no more than 10 micrograms set by the World Health Organization.

Beijing has converted homes and factories from coal heating to clean energy, reducing the city’s annual coal consumption by as much as 74 percent in five years to under 6 million tons in 2017, Chen said at a meeting of the local legislature.

The capital city has also closed or upgraded 11,000 polluting companies and taken more than 2 million obsolete automobiles off the road.

Authorities are now turning their attention to curbing pollution from other toxic substances like nitrogen oxide.

“In the next stage, Beijing will issue a new air pollution prevention plan and step up environmental inspections,” he said. “And we will continue to push the conversion to clean energy from coal in rural areas and phase out vehicles exceeding exhaust emissions standards.”

A new action plan will be finalized to fight air pollution, bolstering further enforcement efforts at the grassroots level, said Chen Jining, acting mayor of Beijing. He was addressing the opening of the first annual session of the 15th Beijing Municipal People's Congress.

Currently, vehicles with high emissions are forbidden within the Sixth Ring Road.

Vehicle exhaust, industrial emissions and coal use are among the main causes of air pollution, and analysis into pollutant formation will help root out significant pollution sources, according to officials.

This year, smog control in the capital will be based on the analysis of the sources of PM2.5 pollutants, Chen said, pledges all-out efforts to reduce the average PM2.5 density.
45. China Extends Tax Rebate for Electric Cars, Hybrids

China will extend a tax rebate on purchases of electrified vehicles through 2020, a boost for hybrid and electric vehicle makers amid a shift by policymakers away from the traditional internal combustion engine. The finance ministry said the tax rebate, which was to expire on January 1, will be extended until December 31, 2020. Eligible models will include all-electric cars, plug-in hybrids and fuel cell vehicles.

The extension comes as automakers brace to meet strict EV quotas that will take effect in 2019. The new rules have sparked a flurry of electric-car alliances between global and Chinese automakers. Some global automakers have called on China to maintain its incentives, citing fears that consumer demand alone will be insufficient to drive sales. The Ministry of Finance said the extension would help “increase support for innovation and development in new-energy vehicles.”

Chinese automakers such as BYD Co. are jostling with global rivals in the race to develop EVs.

46. Electrified Vehicle Sales Surge 53% In 2017 in China

Deliveries of all-electric vehicles and plug-in hybrids jumped 53 percent year on year to 777,000 vehicles in 2017 with the aid of government subsidies. Automakers sold 652,000 all-electric vehicles and 125,000 plug-in hybrids, said the China Association of Automobile Manufacturers.

Among the battery EV sales, 468,000 were passenger vehicles and 184,000 were commercial vehicles. Of the plug-in hybrids, 111,000 were passenger vehicles and 14,000 were commercial vehicles.

Despite the sales surge, EVs and plug-in hybrids represented only 2.7 percent of total vehicle sales in 2017. Last year, China's total vehicle sales -- including trucks and buses -- totaled 28.9 million, up 3 percent from a year earlier.

Sales of electric vehicles, plug-in hybrids and other new-energy cars and light trucks are expected to see sales growth of around 40 percent in 2018, according to an industry association. Sales of NEVs will "definitely" top 1 million vehicles this year, one official from the China Association of Automobile Manufacturers said.

China's finance ministry said in December it will extend a tax rebate on purchases of NEVs until the end of 2020, (See story above) a boost for hybrid and EV makers amid a shift by policymakers away from the traditional internal combustion engine. In China, only domestically built all-electric vehicles, plug-in hybrids and fuel cell vehicles qualify for government subsidies. Conventional hybrids do not.

China government officials have adopted the change in policy to combat smog and pollution in the country's biggest cities.

47. Light-Vehicle Sales Expected to Rise 3% In 2018 On Crossover, SUV Demand

Light-vehicle sales in China are expected to grow 3 percent year on year to 25.6 million in 2018 on strong demand for crossovers and SUVs, predicts the China Association of Automobile Manufacturers. Crossover and SUV sales will jump 11 percent from a year earlier to 11.5 million this year, according to the industry group’s forecast.
But sedan deliveries are predicted to dip 1 percent to 11.8 million.

The association expects the multipurpose vehicle and microvan segments to shrink, with MPV sales forecast to drop 11 percent to 1.8 million and microvan deliveries to likely fall 7 percent to 510,000.

In 2017, China's light-vehicle sales edged up 1.4 percent from a year earlier to 24.72 million vehicles as strong demand for crossovers and SUVs was largely offset by declining deliveries of sedans, MPVs and microvans.

48. China Unveils Carbon Market Scheme for The Power Generation Sector

China has unveiled what will become the world’s biggest financial market aimed at limiting climate change emissions. The Chinese government said it’s working on a carbon emissions trading scheme that will cover 1,700 companies in the power generation sector. The carbon trading system is a scaled-back version of earlier plans. A year ago, the Chinese government considered a carbon scheme that would include some 6,000 companies across a range of industries.

China’s system will adopt a cap-and-trade rule where the biggest polluters purchase credits from those that don’t emit as much. Companies are encouraged to reduce emissions, so they can sell unused allocations.

The program would be applicable to companies that emit more than 26,000 tons of carbon annually. Covering some 3,500 megatons of CO₂ (33.9% of China’s total emissions), the program would be the largest carbon market in the world. For comparison, the European Emission Trading Scheme (ETS) covered 1,939 megatons of CO₂ in 2017 emitted by the sectors of power generation and heavy industry.

The authorities have not specified the date for the carbon trading to begin.

President Xi Jinping’s administration is moving cautiously in designing a system that essentially forces companies to pay for permits to pollute. It’s seeking to balance demands to clear up smog with the forecasts for galloping electricity demand from factories and homes, which will require construction of dozens of new coal-fired plants.

Even a smaller carbon market in China would mark a significant advance for involving markets in limiting pollution, an idea that gained currency two decades ago with the Kyoto Protocol. It prompted Europe to start a carbon market in 2005 and the U.S., under Presidents Bill Clinton and Barack Obama, to work toward a system of carbon pricing that ultimately was rejected by the Senate.

The European Union endorsed China’s move, saying it showed the world is moving toward tighter restrictions on fossil-fuel pollution even as President Donald Trump works to stimulate coal use in the U.S.

Industry executives and environmental analysts have called for carbon prices of at least 30 euros a ton to prompt a rapid movement toward cleaner forms of energy. Even so, the complexity of calculating how much pollution should be allowed and when charges should kick in has bedeviled authorities managing carbon markets from the start, and prices in Europe have averaged well below 10 euros for the past five years.
The Paris Agreement on climate change injected fresh momentum into the global fight against climate change two years ago, bringing together almost 200 countries in a pledge to limit fossil-fuel pollution everywhere for the first time. Xi and Obama worked together on that deal. China’s announcement is another sign that the government there remains committed to the effort even though Trump isn’t.

The EU was the first to require carbon permits, in 2005, only to see the price plunge in part because participating nations handed out too many allowances for free. Australia repealed its carbon tax in 2014 and scrapped plans for permit trading after the measures were blamed for destroying jobs. But carbon markets in various forms are in place in California, New Zealand and South Korea, where they’re attempting to learn from each other’s mistakes.

China has been running pilot programs since 2013 in some regions, where transaction values totaled 4.5 billion yuan ($680 million) as of September, Li Gao, an official of the climate-change department at the NDRC, said at a briefing in October. The agency said recently that companies that qualify for the national system will stop participating in the pilot projects.

Li said China has yet to determine how it will allocate permits to industry and will also work on building registration and trading systems for the market. China will allocate quotas to its power industry using a reference-line method under which companies that have better management and lower emissions will be given more quotas, said Jiang Zhaoli, deputy director of the climate change division at the NDRC.

49. Wärtsilä Introduces Its HY Hybrid Tug in The Chinese Market

Wärtsilä has adapted its hybrid tug design to meet the needs of the Chinese market. This version of the Wärtsilä HYTug has received an Approval-in-Principle recognition by the China Classification Society (CCS).

The Wärtsilä HYTug is designed for operational efficiency and lower fuel consumption than is possible with conventional tug designs. The design is based upon Wärtsilä’s ‘first-of-its-kind’ fully integrated hybrid power module that combines engines, an energy storage system using batteries, and power electronics optimized to work together through a newly developed energy management system (EMS).

When operating in ‘green’ mode, it is unlikely that there will be any visible smoke from the Wärtsilä HYTug since the load is being picked-up by the batteries. At the same time, the noise level of the tug will be notably reduced.

The design is available in three different hull sizes: a 28 m harbor tug with a 50-t bollard pull, a 29. 5m harbor tug with a 75-t bollard pull, and a 35 m escort tug with a 75-t bollard pull. A bollard pull range of 40 to 90 t can be covered with the appropriate Wärtsilä equipment modules. Each design comes with the option to select either diesel mechanical hybrid or diesel electric hybrid propulsion.

50. Toyota Is Betting on Plug-In Hybrids in China

Toyota Motor Corp. hasn't launched any electric vehicles in China. Yet the Japanese automaker is poised to grab a big share of the EV market, thanks to a market strategy and superior R & D. Other global automakers are focusing on all-electric vehicles. That’s because EVs will earn more
credits than plug-in hybrids under China’s new carbon credit program, which takes effect in 2019. But Toyota prefers a different approach.

The company is wary about consumer demand for all-electric vehicles after Beijing phases out EV subsidies. So, Toyota will produce plug-in hybrids first, China chief Hiroji Onishi said at the Guangzhou auto show.

That's a safe bet. EV deliveries in China are surging but sales have been propped up by government subsidies. Moreover, China still lacks an extensive network of charging stations. So, hybrids are more practical than pure EVs since their owners don’t suffer from range anxiety.

When it comes to hybrids, Toyota also has more engineering expertise than any other automaker. In 2013, the company opened an advanced research center in the east China city of Changshu. The center covers 2.3 million square meters, with a 5.2 km test track. To date, the r&d center has been used mainly to engineer powertrains and test batteries for Toyota's conventional hybrid models. Onishi says the center also will develop plug-in hybrid versions of the Corolla and Levin sedans, which will be produced in China.

A successful launch seems likely. In 2015, Toyota’s Chinese joint ventures began assembling conventional hybrid variants of the Corolla and Levin. Sales have steadily risen and in 2017 Toyota expects annual deliveries to total 100,000 vehicles.

In 2019, Toyota will begin local production of plug-in hybrid models. And in 2020, the company will start selling all-electric vehicles, too.

Toyota has also begun preparations to test its fuel-cell powered Mirai in Changshu, where it has a hydrogen fuel station. The company also is evaluating fuel-cell vehicles for China's commercial market.

China's fast-growing EV market is dominated by domestic brands such as BYD Co. and BAIC Motor Corp. But Toyota expects it will catch up due to its engineering prowess and rich product mix.

51. New Year, New Environmental Tax in China

At the close of the western new year, China’s State Council signed off on a regulation to implement the first national environmental tax law. The law was passed in 2016 but only came in to effect at the end of 2017. It levies taxes on companies based on pollution from solid waste, water, air, and noise. Within ranges dictated by the law, local governments can set their own tax rates.

The Ministry of Environmental Protection is charged with monitoring the pollutants subject to the tax. According to interviews conducted by Global Times, many companies and local governments have not been made aware of the tax yet, so implementation is still nascent.

Taxes will be calculated monthly and collected on a quarterly basis. The environmental tax replaces a system of fining polluters that has been in place since the late 1970s. Riddled with loopholes, the system of fines was not deemed sufficiently effective in preventing pollution. The former regulation was nullified at the same time the new environmental tax was signed into effect.
52. China Punishes Carmakers That Miss Fuel Economy Targets

China will suspend production of 553 passenger vehicle models that failed to meet the government’s fuel consumption standards, state news agency Xinhua said. The suspension took effect on January 1, Xinhua said, citing the China Vehicle Technology Service Center.

The models include products from several major Chinese carmakers and joint ventures such as FAW-Volkswagen, Beijing Benz Automotive, Chery Automobile Co. and Dongfeng Motor Corp.

“With the war on pollution in full swing, China has been pushing for green transportation by toughening emission limits and encouraging the use of new energy vehicles,” the report noted.

Pollution is a sensitive issue in China, with large swaths of the country chronically engulfed in smog. The government has vowed to tackle the problem.

53. China Action Against High Diesel Truck Emissions a Warning to Others

Two automakers in China’s Northeastern Shandong province will pay 38.77 million yuan ($5.95 million) in fines for selling diesel trucks that did not meet emissions control standards, China’s Ministry of Environmental Protection (MEP) has announced. Tian Weiyong, director of the Environmental Supervision at the Bureau of the MEP, said the fines are a warning that the rest of the auto industry needs to follow environmental regulations.

Controlling emissions from motor vehicles will be a major goal for environmental authorities this year after 2017 saw intense focus on “small, scattered, polluting” companies to combat air pollution plaguing the country, Tian said January 9. “We will increase our efforts to control motor vehicle pollution this year and carry out inspection and supervision of motor vehicles and fuel sources across the entire country,” Tian said.

The investigations into the two companies—Shandong Kama Automobile Manufacturing Co., Ltd. and Shandong Tangjun Ouling Automobile Co., Ltd.—were launched by authorities in 2016 following the implementation of an amended Air Pollution Prevention and Control Law from the start of that year. “In our supervision and inspection of environmental compliance of motor vehicles since 2014, we found on several occasions that these two companies deliberately faked
and produced non-compliant vehicles, causing adverse impacts on the industry and seriously affecting the upgrade of vehicle emission standards,” Tian said.

The MEP will set up a blacklist of automakers, engine makers, and others in the auto industry that violate environmental standards. The blacklisting—part of joint enforcement actions by the Ministry of Industry and Information Technology, the Ministry of Public Security, the Ministry of Transport and several other administrative units at the central-government level—could block companies from access to loans and other financial assistance.

Most of these companies are state-owned, though usually tied to provincial or local governments, so blocking them from such finance would scuttle expansion plans, investments in new products, and other activities.

Shandong Kama was fined 31.74 million yuan ($4.87 million) after an investigation found that eight models of its light-duty diesel trucks that were designed to meet China IV emissions standards—comparable to Euro IV standards for similar vehicles—had excessive levels of carbon monoxide and nitrogen oxide. These vehicles also had malfunctioning onboard diagnostics (OBD) systems for a heavy-duty truck model that the company knew about, the MEP said.

Companies producing light and heavy-duty diesel trucks in China now must comply with the even stricter China V emissions standards nationwide, which are similar to the Euro V limits. Some standards for vehicle engines sold in Beijing are now even higher—at China VI, a standard that will have to be met nationwide sometime in 2020.

Shandong Tangjun received a 7.03 million yuan ($1.08 million) fine because its light-duty trucks produced in the first half of 2016 had excessive emissions of carbon monoxide and nitrogen oxide even though they were marketed and sold as meeting China IV standards.

In statements on the investigation, Tian of the MEP said vehicles produced under the older standards were inspected along with those that had to meet the latest requirements because companies had “not been paying enough attention” to the regulations, which will be fully enforced under the amended air pollution law.

A source from the Vehicle Emission Control Center at the MEP told the press January 11 that a special diesel vehicle inspection team was set up in 2016 and works with a third-party testing company that reviews new vehicles and those at production sites for compliance with emission standards.

If violations are found, companies can then be subject to on-site inspections without warning, and manufacturers are required to submit to further testing at that time. The source said that the MEP inspections focused on diesel vehicles to help standardize the market and because “fraud is common in this market.”

He added that the step-by-step process took a long time because the MEP had not conducted such detailed inspections along with third-parties before.

“I think it will be a deterrent for companies,” he said. “The MEP also is interested in seeing what the reaction is from the market and from other companies.”
Dong Yang, secretary of the China Association of Automobile Manufacturers (CAAM), told reporters that “automobile manufacturing companies should see [these cases] as an important precedent.”

54. 75% Of India’s Air Pollution-Related Deaths Are Rural, Study Finds

Rural Indians, who make up about two-thirds of the country of 1.3 billion people, are disproportionately at risk of breathing polluted air, according to new research.

India’s air pollution has been making headlines for years, with attention focused on Delhi, the capital, once named the most polluted city in the world by the World Health Organization. Yet new research published by an international team of scientists, including experts from the Indian Institute of Technology Bombay and the Health Effects Institute, estimates that 75% of air pollution-related deaths in India during 2015 came in its rural areas.

"Air pollution is a national, pan-India problem. It's not limited to urban centers and megacities, and it disproportionately affects rural Indians more than urban Indians," said Chandra Venkataraman, a professor at the Indian Institute of Technology Bombay, who was a member of the working group that conducted the study.

The study found that exposure to the smallest and most dangerous airborne pollution particles, known as PM2.5, was roughly equal across rural and urban India. Part of the reason for the higher proportion of deaths in rural areas, though, is that about two-thirds of the population still lives there rather than in cities, the scientists say.

The findings are the result of a comprehensive, state-by-state analysis of the sources of air pollution and what impact it has had on health in India.

"This put all the pieces together," said Milind Kandlikar, a professor who studies air pollution at the University of British Columbia. He was not involved with the new research. "It moves from sources to human health effects. And it does this across the entire country."

In 2015, over a million deaths could be attributed to air pollution in India, the study says: about 25% of the total deaths linked to air pollution around the globe. India’s air pollution problem has steadily worsened over the past 25 years, as its economy has grown.

According to the new research, residential biomass burning is the largest individual contributor to air pollution across India, with many poor residents relying on burning wood, crop residue or cow dung to heat homes or to cook food.

The study also highlighted other sources of pollution, such as crop burning in parts of northern India -- an annual affair at the onset of winter that contributes to the toxic haze that settles over Delhi as temperatures drop -- and transport emissions.

Based on their findings, the researchers say that, unless Indian authorities commit to aggressive energy efficiency targets and clamp down on biomass burning, air pollution deaths could rise to as many as 1.6 million across the country by 2030. Aggressive and concerted policy action, on the other hand, could help India avert as many as 1.2 million air pollution-related deaths by the middle of this century.
55. Toyota And Honda Suspend Exports to Vietnam

Toyota Motor and Honda Motor have suspended exports to Vietnam since the beginning of the year following the implementation of a rule that requires stringent checks on imported vehicles, a move viewed as protectionism by industry officials. The new rule came into effect just as Vietnam finally eliminated its import tariff for automobiles from within the Association of Southeast Asian Nations from 30% on January 1, two years later than other developed members of the bloc.

Toyota said that it has halted all production for export to the Vietnamese market. The Japanese automaker manufactures locally in Vietnam, but imports from Thailand, Indonesia and Japan account for around one-fifth of what it sells in the market, or 1,000 units per month. Models imported include the Hilux pickup trucks, Yaris subcompacts, sports utility vehicle Fortuner and the luxury car Lexus.

"The Vietnamese market slowed down last year clearly because consumers refrained from buying as they waited for the tariff removal at the end of 2017," Toyota Motor Thailand President Michinobu Sugata told reporters in Bangkok.

Indeed, auto sales in Vietnam between January and November slumped 10% on the year to 245,000 units. "We were anticipating a big jump in 2018 but due to the non-tariff barriers set by the Vietnamese government we cannot export to the market at all," he said.

The so-called Decree 116, announced in October, requires emission and safety tests to be conducted on every batch of automobile to be imported. In the past, only the first shipment of each model would be tested. The Japanese Chamber of Commerce and Industry in Vietnam said one emission test could take two months and cost up to $10,000. "It will cause [a] huge waste of time and money," it said in a statement addressing Prime Minister Nguyen Xuan Phuc in December.

The decree also requires all models to obtain a Vehicle Type Approval certification issued by authorities of the exporting country. VTA certifications are to show that the vehicle meets standards of the country it will be sold in and is normally issued by domestic entities of the importing country.

Since the decree was announced in October, the governments of major exporters such as Japan, Thailand and the U.S. have expressed concerns to Vietnam that it would become impossible for them to sell into the country. They have also suggested that the decree could violate World Trade Organization rules.

56. Plan for All-Electric Cars in India by 2030 Not Viable, Says Mercedes Chief

Luxury carmaker Mercedes-Benz has urged the government "not to rush with the all-electric vehicles push" and thus "foreclose better technological options" for future generations as the rest of the world is racing to run on hydrogen and not electricity. The car manufacturer also called for adopting a less ambitious plan of promoting e-cars arguing that a nationwide electrification of the auto industry is just not commercially and technologically viable.

Mercedes-Benz India managing director and chief executive Roland Folger said, "By 2040, the whole world will be driving home hydrogen cars. To me the whole plan to go electric nationwide looks like a rushed with idea." More importantly, he added, with such a rush we are foreclosing options for better technologies for the future generations.
The auto industry in the country was taken by surprise after the Narendra Modi government announced last year that the entire auto industry would go electric by the turn of 2030. The announcement came on the heels of the government skipping one stage in pollution standards and advancing the introduction of BS-VI fuel by two years.

But there has been widespread criticism from many quarters that the nationwide e-cars plan is neither economically nor technologically feasible and is based more on impulse than sound planning, strategy or technology.

Calling for better and coordinated efforts, Folger said, "Ideally, regulators and policymakers should be totally aligned with what's happening on the technology front because 5-10 years is a short period in the auto landscape. The least policymakers can do is to take the auto industry into confidence."

Pointing out that the time frame announced to go all electric is very short, given the very long-term nature of the auto industry, he said this would mean that all auto companies stop investing in or developing any more products. "If so what will happen to the investments already made in other technologies? Our planners should know that over the next two decades or so the whole world will be driving hydrogen cars and not electric cars," Folger said.

On the huge financial burden, the plan would be on the nation, he wondered whether the government has thought about this aspect before arriving at this decision. "Can the government invest hundreds of billions of dollars into setting up charging stations and associated infrastructure? If not, then who will foot the bill? Definitely not the private sector. If at all government manages to raise funds, is it worth the effort in terms of meeting the key objective of bringing down pollution?" he asked.

In fact, Folger thinks that the move would be "more counter-productive in terms of additional power demand, as you are still building and supporting thermal power plants."

"Yes, with the current coal-based power generation model, this would be more polluting as demand for electricity will jump manifold. Or do we have the finances to upgrade all our old thermal plants? Or can we go completely off polluting coal plants? If yes, what is the cost that such a plan will entail?" he wondered.

As a way out, Folger suggested "plug-in hybrids" as the best option for the country despite such vehicles being costlier than e-cars. "Yes plug-in hybrids are more costly than e-cars. But if we consider the cumulative cost of putting up nationwide infrastructure in terms of charging stations and other supporting infra for electrification, plug-in hybrids are more affordable," he said.

Calling for strong government support in terms of policies, taxation and in building infrastructure in cities, he said "a nationwide electrification of the auto industry is just not commercially and technologically viable."

57. 2017 Challenging for Delhi's Transport Department
With the number of registered vehicles crossing the one-crore\(^3\) mark and air pollution taking center-stage among the issues in the national capital, the Delhi transport department had a challenging 2017.

Amid criticism over inadequate public transport facilities, the department worked hard to get more buses besides taking up measures to ensure improved women safety.

A highlight of the year for the department was the appointment of Kailash Gahlot as the new transport minister, by Chief Minister Arvind Kejriwal in May. Gahlot faced an uphill task of boosting the public transport infrastructure with the state transporter DTC having a depleting number of buses.

Facing flak from various quarters over non-procurement of even a single bus in AAP's three-year rule, the minister rolled out the process for buying 2,000 buses. The process for procurement of 1,000 standard floor buses each for the DTC and the Cluster scheme is on and tenders are expected to be issued soon, said a transport department official.

The department is also working on having 500 electric buses to combat air pollution and has approached the Centre for financial help under the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME) scheme.

The process for equipping 6,350 DTC and Cluster buses with CCTV cameras was also taken up by the department. It is hiring a consultant to find a suitable vendor and has approached the Centre for financial assistance from Nirbhaya Fund to finance the project.

However, the biggest challenge faced by the department was arranging comfortable public transport facilities for millions of commuters during emergency air pollution situations, invoking the road rationing measure. The odd-even scheme that was announced last month during emergency pollution levels had a big question mark over it once the National Green Tribunal denied exempting women drivers and bikers from it. The government had tried to persuade the NGT to exempt the two categories citing reasons such as inadequate public transport facilities in the city.

The number of registered vehicles in the city crossed the one crore mark in May. Besides over 32 lakhs\(^4\) cars, there are over 66 lakh two-wheelers that are termed by the experts as major air polluters due to poor emission standards.

Transport department officials say that efforts are on the increase the number of buses by roping in private operators in a big way. "The work on a policy to increase the number of buses with involvement of private operators is being hammered out. Such steps are necessary in view of the need of around 11,000 buses cited by various stakeholders including the court," said an official.

The department also worked on city taxi scheme and a parking policy during the year that are yet to be announced.

In the new year, the challenge before the department will be to give concrete shape to its various plans and policies besides raising the number of public transport buses which is around 5,500 at present.

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\(^3\) 10 million
\(^4\) 100,000
58. Proposal to Convert 200 Diesel Locomotives to Electric Under Consideration

A proposal to convert 200 diesel locomotives to electric locomotives is under consideration, the Indian government has informed Parliament.

In a written reply in Rajya Sabha, Minister of State for Railways Rajen Gohain said that there is a proposal to completely phase out diesel locomotives in the next five years.

"It is planned to achieve annual recurring saving of Rs 13,510 crore per annum at current price after switch over of all trains from diesel traction to electric traction," he said.

59. Western Taiwan Hit by Air Pollutants from Cold Air Mass

The Air Quality Index (AQI) in most of western Taiwan recently flashed a red alert, meaning the air was "unhealthy" for the public, due to air pollutants brought by a cold air mass, according to the Environmental Protection Administration's (EPA) Taiwan Air Quality Monitoring Network.

The AQI in more than 40 monitoring stations in the west flashed red, the highest possible air pollution warning, while no less than 20 stations flashed orange, meaning the air was "unhealthy for sensitive groups" such as young children, seniors and people with chronic diseases. The monitoring stations in Meinong, Pingtung and Chaozhou were the only three places in the west where air quality was fair (yellow).

In all eastern areas, air quality was either good (green) or fair, the monitoring data indicated.

The EPA's AQI considers ozone, PM2.5 and PM10 particulates, carbon monoxide, sulfur dioxide and nitric oxide concentrations in the air.

The EPA advises people in areas with poor air quality to avoid outdoor activities if they experience eye irritation, coughing or a sore throat. Meanwhile, young children, seniors and people with respiratory and cardiovascular diseases in those areas should avoid physical exertion and wear facial masks when outside, the EPA said.

In response to increased air pollution in western Taiwan, the state-owned Taiwan Power Co. (Taipower) was planning to lower output at the Hsieh-ho Oil-Fired Power Plant in the north, the Taichung Coal-Fired Power Plant in the center and the Hsinta Coal-Fired Power Plant in the south.
Meanwhile, Cheng Ming-dean, director of the Central Weather Bureau's Meteorological Research and Development Center, said that transboundary haze pollution in China has begun moving southward. However, such pollutants have not reached Taiwan and the poor air quality on the island could be largely attributed to domestic sources, such as haze in the morning, said CWB forecaster Lin Ding-yi.

60. Taiwan To Implement Low-Sulfur Fuel Rule for Ships

Taiwan is trying to be ahead of the curve in controlling air pollution from ships, with the Ministry of Transportation and Communications (MOTC) announcing a low-sulfur fuel oil rule for ships entering its international ports that will go into effect January 1, 2019. According to the International Maritime Organization's (IMO) International Convention for the Prevention of Pollution from Ships, the global limit for sulfur content in fuel oil used in ships will be set at 0.5 percent mass by mass (m/m) from January 1, 2020.

The current global limit is 3.5 percent m/m.

Taiwan will therefore be ahead of the times, requiring foreign ships entering its international ports and domestic ships sailing on international routes to use fuel oil that contains 0.5 percent m/m or less of sulfur starting next year, said Yeh Hsieh-lung, deputy director-general of the MOTC's Department of Navigation and Aviation.

To encourage ships to switch to low-sulfur fuel even earlier, the MOTC will provide between February 1 to the end of the year a subsidy of NT$5,000 (US$172) to all vessels, local and foreign, regardless of size, entering Taiwanese ports, if they make the change before the January 1, 2019 implementation date, according to Yeh.

61. Transpacific Airline Fuel Efficiency Ranking, 2016

A new ICCT report compares the fuel efficiency of 20 airlines operating nonstop flights between the mainland United States and East Asia and Oceania and extends the previous transatlantic fuel efficiency methodology to the transpacific market.

Highlights

- Hainan Airlines and All Nippon Airways (ANA) were the most fuel-efficient airlines on transpacific operations in 2016, both with an average fuel efficiency of 36 passenger-kilometers per liter of fuel (pax-km/L). Qantas Airways ranked as the least fuel-efficient, burning an average of 64% more fuel per passenger-kilometer than Hainan and ANA.
- Freight share was found to be the most important driver of fuel efficiency overall, explaining almost half of the variation in airline fuel efficiency across carriers, followed by seating density, which accounted for nearly one quarter of the variation. Aircraft fuel burn and passenger load factors were relatively less important.
- There was an inverse relationship between aircraft size and fuel efficiency on transpacific operations – as aircraft weight, or maximum takeoff mass (MTOM), increases, fuel efficiency declines. This is predominantly because aircraft with four engines are generally less fuel-efficient than those with two.
- The estimated gap between the most and least fuel-efficient transpacific airlines was wider than was observed on transatlantic routes in 2014. This may be due to the incorporation of actual, as opposed to estimated, belly freight carriage into this report.
- Simplified online carbon calculators, such as the International Civil Aviation Organization’s (ICAO’s) carbon calculator, produced estimates of average aircraft fuel burn and fuel efficiency comparable to the findings of this report. ICAO’s carbon calculator does not quantify carrier- or flight-specific estimates, however, with results varying significantly for carriers that are much more or less efficient than average.

AFRICA and the MIDDLE EAST

62. Kenyan Government to Tighten Grip on Vehicle Importation to Curb Emissions

Exhaust fumes from vehicles remains the biggest pollutant in the country, a UN Environment Assembly was told by Kenya’s Environment Secretary Alice Kaudia. She said the government will tighten its grip on implementation of laws governing importation of vehicles to cut carbon emissions from exhaust fumes.

She said the government will ensure strict adherence to the requirements that only vehicles that have not been used for over eight years are allowed into the country.

"We are also strengthening the testing of vehicles to curb emissions. This will reduce the pollution and improve the quality of air that we breath," she said.

Kaudia spoke at the third session of the United Nations Environment Assembly in Nairobi.

She said the government is working closely with strategic partners, such as the 119-member climate and clean air coalition, with a specific focus on reducing pollution from vehicles.

The Environment Secretary said the 47 county governments have a role to play in ensuring the air people breathe is of good quality.

Kaudia was one of the members of the panel discussing ways countries can improve air quality. She said counties will be supported by the state department of environment to work with various strategic partners in the management of solid waste. Kaudia said e-waste regulations and management guidelines are already in place.

63. Will Top Car Brands in Africa Go Electric?

Toyota brand enthusiasts in East Africa may soon have an option to acquire electric versions of their favorite car models, after the Japanese multinational announced plans to have an electric or hybrid version of each of its models by 2025.

According to the announcement, Toyota is targeting to make sales of more than 5.5 million electrified vehicles, including more than 1 million zero-emission cars by 2030, as it moves to phase out its combustion-only models. To achieve the target, Toyota plans to start selling more than 10 different pure battery electric cars by 2020, targeting China as its first focus market.

Batteries are a core technology of electrified vehicles and generally present limitations relating to energy density, weight and cost. "Toyota and Panasonic will start a feasibility study on a joint automotive prismatic battery business in order to achieve the best automotive prismatic battery in the industry," the company said in a statement.
In 2015, the company unveiled its Environmental Challenge 2050 plan, which comprised a set of environmental protection targets including reducing vehicle carbon dioxide emissions by 90 per cent from 2010 levels.

Toyota remains Africa’s most popular car brand with a presence in all the 54 countries on the continent. In 2012, it sold 237,000 vehicles on the continent accounting for 14 per cent of the market. In Kenya, Toyota comes second in control of the motor vehicles market selling 1,953 units in the first nine months, compared with Isuzu East Africa’s 2,935 units.

Toyota becomes the second major car manufacturer to announce plans to go electric, after Volvo which announced that each of its models launched after 2019 will be electric.

According to data from the International Organization of Motor Vehicle Manufacturers (OICA), Toyota was 2016’s largest car producer, accounting for more than 10 million units.

Toyota’s plans to electrify its entire car lineup is expected to shake up the global motor vehicles sales market, in what is seen as the potential confronter to Tesla’s control over the electrical cars market. While the announcement by major players in the auto motives industry including Toyota and Volvo is seen as the beginning of a major revolution towards more efficient eco-friendly motoring, it may take a little longer before their electric cars are on the roads.

The development of batteries used by electronic vehicles will require an increased production of the minerals, necessary in their production. Production of an 85kWh battery used by Tesla, for instance, is estimated to consume about 8 kg of cobalt minerals.

Importing a secondhand Nissan Leaf — the bestselling electric car — to Kenya costs between $20,000 and $24,000, way higher than the cost of importing most secondhand cars of its size. Further, charging it takes about 30 minutes with a limited travel range of about 120km before requiring a recharge. A huge gap also exists in the lack of charging infrastructure as many African countries are yet to begin developing charging stations — the most vital support infrastructure for electric cars.

The demand for electric cars in Africa also may not take off during the continent’s power crisis marked by insufficient generating capacity, unreliable supplies, high cost. In Kenya for instance, electricity peak demand stood 1,727 in November 2017, against the country’s installed capacity of 2,336MW. Many African countries, it should be noted, have large amounts of renewable energy including geothermal.

64. Restricting Diesel Engine Trucks Eases Tehran’s Air Pollution

Following consistent air pollution in the metropolis of Tehran, trucks running on diesel engine were temporarily banned from the streets, which dramatically reduced pollutants in the capital.

Diesel trucks release three major pollutants of black carbon, nitrogen oxides and pm 2.5 fine particles and recent temporary restrictions that have been set for trucks in Tehran has led to a 50 percent reduction of these emissions at nights, the director of Tehran’s Air Quality Control Company said recently.

Normally, trucks can ply Tehran streets during specific hours of night, but recent severe air pollution led to the decision that clunker trucks would be banned from streets till the end of [Iranian calendar month of] Dey [December 22 to January 20], Mehr reported.
After the implementation of these decisions, data derived from Tehran’s three main air quality control stations show that the mean concentration of the three aforementioned pollutants has been reduced to half of the amount recorded over the previous week, Vahid Hosseini highlighted.

Hosseini went on to say that the data obtained from air quality stations demonstrate that the air quality of the Metropolitan’s nights is poorer than that of the days and the main difference between traffic of nights and days is the presence of heavy diesel-engine trucks overnight which has a visible effect on air quality.

Long-term studies show that vehicles count for 80 percent of Tehran’s air pollution, Hosseini added.

Recognizing the incomplete combustion of vehicle engines as the main cause of black carbon, the Sharif University professor maintained that this pollutant is largely released by diesel vehicles. By nightfall and rush of trucks to the streets, a considerable increase is seen in the concentration of this pollutant, he added. There are two other pollutants – namely nitrogen oxides and pm2.5 fine particles – which just have the same day-down/night-up scheme as black carbon, told the official.

The sinking of atmospheric boundary layer (ABL) at nights results in reduction of air volume to which pollutants are injected, so emissions should be strictly controlled over nights, highlighted the professor,

65. Dubai Starts Trial Run for Its First Hydrogen-Powered Taxis in The Region

Dubai has launched a trial run of the region’s first electric hydrogen-powered vehicle, the Roads and Transport Authority (RTA) announced on 23 December. The hydrogen-powered car, Toyota Mirai, will be on a trial run as the RTA continues to look for alternate fuel options as part of its sustainable transport strategy, the Khaleej Times reported.

The futuristic vehicle, that is touted as a zero-emission car, emitting only water, can run up to 500 km on a single refuel and is noiseless. Its refueling can be done in minutes, unlike electric vehicles.

The vehicle is powered by hydrogen, which generates electricity inside the engine after being mixed with oxygen supplied through the grill intake at the front of the vehicle. It is characterized by high-level driving convenience and uses Toyota Fuel Cell System.

"RTA attaches paramount importance to protecting the environment and saving power consumption... This experiment is a part of a low carbon strategy aimed at making Dubai a role model in efficient power consumption and low carbon emission," said Mattar Al Tayer, Director-General and Chairman of the Board of Executive Directors of RTA.

He added that the initiative will help the RTA achieve its target of reducing carbon emissions of taxis by 2 percent.

Al Tayer said that the Dubai Taxi Corporation (DTC), a subsidiary of the RTA, has become the first taxi operator in the Middle East to deploy a hydrogen fuel cell electric vehicle (Mirai) in its fleet. "RTA will start a trial run of the vehicle as part of its limousine service at the Dubai
International Airport to assess the economic feasibility and environmental benefits of its operation," he said.

In 2008, Dubai became the first city in the region to begin a trial of hybrid vehicles as taxis and now around 800 hybrid taxis operate in the city. RTA announced a plan to replace half of the taxi fleet with eco-friendly vehicles by 2021. At present, around 20 percent of the fleet is hybrid.

**GENERAL**

66. IEA Director Says E-Cars Offer No “Miracle” Climate Fix

Even if the International Energy Agency’s most optimistic forecast of 280 million electric cars on the world’s roads by 2040 is realized, the impact would still represent less than 1% of global CO2 emissions, the head of the Paris-based bureau said recently.

“This doesn’t mean we shouldn’t push electric cars – we should – but don’t expect electric cars to make a miracle and solve our climate problem,” IEA director Fatih Birol said as he presented the agency’s recently published World Energy Outlook 2017 to an audience of Brussels policymakers and lobbyists.

“Firstly, the power sector is still not decarbonized, and secondly, the share of transportation in total CO2 emissions is limited, and the share of cars within transportation emissions is small,” said Birol.

His comments came despite positive figures in the report, which estimated that although some 50% of the electric vehicles expected under a “new policies scenario” would be in China, proportionally speaking the EU is in the lead. “The announced phaseout of conventional engines in France, Netherlands and United Kingdom means that 40% of cars sold in the European Union in 2040 are electric... the highest share in the world,” the report states.

The latest edition of the IEA report, which is widely used as a guide by policymakers and industry, was compiled before the European Commission unveiled the first part of a “clean mobility” package containing new emissions standards for cars and vans, albeit with no binding quota for zero-emission models.

The agency’s report notes that 280 million electric cars would only represent 15% of an estimated two billion cars on the road by 2040, and Birol also warned of a “blind spot” among policymakers with regards to lorries, one of the sectors he said was driving an overall increase in global oil demand.

European Commission vice-president for energy, Maroš Šefčovič denied the EU was ignoring the freight issue, although he acknowledged that “until recently we have been overlooking the increasing proportion of greenhouse gases emitted by the transport sector”. “We haven’t forgotten about trucks, and we will come up with a proposal early next year, and I’m very optimistic that we can also achieve tangible results in aviation and shipping,” Šefčovič said.

Speaking shortly after taking part in COP23 talks in Bonn that laid bare challenges facing policymakers in implementing the Paris Agreement, Šefčovič noted that even with the policy measures rolled out to date properly implemented, Europe’s emissions would still be “well over” the levels needed to limit global warming to 2 degrees Celsius.
EU lawmakers are currently negotiating EU targets for energy efficiency and renewable energy share by 2030, and Šefčovič said he was “absolutely convinced” that Europe would exceed the targets it sets itself “because of the technological revolution” underway.

“We see the costs of renewables and integrating them into the system are falling almost every day,” he said.

67. Electric Buses Projected to Take Over Half the World by 2025

Nearly half of the municipal buses on the road around the world will be electric within seven years, with China expected to dominate the global market as it aims to cut urban pollution and support domestic manufacturers. The total number of electric buses in service is forecast to more than triple, from 386,000 last year to about 1.2 million in 2025, equal to about 47 percent of the worldwide city bus fleet, according to a report from Bloomberg New Energy Finance.

“China will lead this market, due to strong domestic support and aggressive city-level targets,” wrote Aleksandra O’Donovan, an analyst for BNEF and author of the study. By 2025, the report said, the country’s fleet will be 99 percent battery-powered buses.

Electric buses remain more expensive up front than those fueled by diesel or compressed natural gas, but BNEF found that battery-powered buses can already offer a lower total cost of ownership when fuel and maintenance expenses are considered. Projected declines in battery prices will make the upfront costs of some electric models competitive with a diesel version by 2026, according to the study.

Here Comes the Electric Bus
China forecast to dominate a market expected to more than triple in seven years

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<th>Total electric bus deployments, in thousands</th>
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Source: Bloomberg New Energy Finance

Public buses are a key part of the urban transit infrastructure, and the fact that they serve routine, fixed routes makes them ideal for electrification. Cities across the globe increasingly see electric buses as a way to reduce local air pollution, and such municipalities as Paris and Amsterdам have set goals to switch to zero-emission buses in the coming years. Recently, mayors of some of California’s largest cities, including Los Angeles and San Jose, urged the state’s environmental
regulator to introduce incentives and requirements to spur a shift toward electric buses from ones that use diesel or natural gas.

China has set the most aggressive clean-energy bus-deployment targets. BYD Co., China’s largest seller of electric vehicles, is well-positioned to take advantage of this government push. Last year in China, BYD sold 100,183 new-energy vehicles—a category that includes full electric and hybrids, and the company’s buses now operate in 200 cities around the globe.

68. Extreme Weather Explicitly Blamed on Humans for The First Time

The weird weather just keeps on coming. An oppressive heatwave dubbed Lucifer stifled Europe in August, then a series of powerful Atlantic hurricanes hammered the Americas. Then, unseasonably hot and dry conditions began driving wildfires in California. During and after such events, the same question always arises: is global warming to blame?

Basic theory suggests that climate change will lead to more extreme weather but making the link to individual events is difficult. There was a time when the typical answer was something along the lines of, ‘Perhaps, but it's hard to say.’ The science has advanced over the past several years, and scientists have identified global warming’s relative contribution to many extreme weather events. Now, for the first time, climate researchers are reporting that some weather events would have been outright impossible without the warming influence of humanity’s greenhouse-gas emissions.

This kind of confident assertion rarely makes its way into the scientific literature. Yet it appeared in three studies included in a special annual edition of the Bulletin of the American Meteorological Society (BAMS) dedicated to attributing the causes of extreme weather events. If these results hold up, the implications would be profound and unsettling: humanity has already pushed the global climate into a new regime. To be clear, natural variability will always have a major role, but the blame for some of the most extreme weather phenomena — as well as some of the resulting impacts — would rest squarely on our own shoulders.

Released on 13 December, the research in question focused on 2016, the hottest year on record. One modelling study, led by scientists at the US National Oceanic and Atmospheric Administration, compared the temperature record to a simulated baseline climate without human greenhouse-gas emissions. In baseline simulations of some 24,000 years of weather from seven climate models, nothing like the record warmth of 2016 ever occurred. Greenhouse-gas emissions, chiefly those from fossil-fuel use, are a prerequisite for this kind of heat. What’s more, the paper indicates that greenhouse gases began to push the climate outside the realm of natural variability around 1980.

These conclusions necessarily assume that today’s climate models are sufficiently robust to capture the full range of natural variability. Others will certainly weigh in on the question, but the results suggest that we may need to reframe how we think about extreme events. The epic El Niño warming event in the eastern tropical Pacific Ocean in 2015–16, for example, might have pushed global temperatures to record levels, but only because it was amplified by more than a century of greenhouse-gas emissions. From this perspective, global warming might also be to blame for many of the impacts that we normally attribute to El Niño itself, which roils weather patterns across the globe.

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Indeed, a second study in the special issue identified global warming as the culprit behind heatwaves that gripped much of southeast Asia in 2016. In India, the heat killed at least 580 people from March to May. Thailand recorded its highest temperature ever — 44.6 °C — on 28 April, and energy consumption across the region hit record levels as people turned on air conditioners for relief. El Niño might have exacerbated the situation, says the study, but the temperatures “would never have happened without the anthropogenic warming”.

Researchers came to the same conclusion in a third study, focused on marine warming in the Gulf of Alaska and the Bering Sea that began in 2014 and climaxed last year. El Niño might have been involved, but global warming set the stage, with far-reaching consequences. Ice on Alaskan rivers broke up earlier than ever; a lack of sea ice affected fishing; and toxic plankton blooms reduced shellfish harvests. Tens of thousands of seabirds were found dead, probably starved.

Extreme weather would be expected from time to time, regardless of global warming. In fact, of the 131 papers investigating extreme events that BAMS has published over the past 6 years, 35% found that global warming played no appreciable part. Nevertheless, the latest results suggest that the climate is entering uncharted territory, and that would mean that weather will increasingly fall outside the historical norm. From this perspective, humanity hasn’t just loaded the dice. We have replaced them with a whole new type that behave in ways we don’t fully understand.

The solution has been clear for more than two decades: governments need to take aggressive action to curb greenhouse-gas emissions. By attributing real-world impacts to global warming, scientists are providing citizens and political leaders with further evidence that climate change is a clear and present danger, not a distant threat to future generations. Perhaps in 2018, policymakers will finally realize which way the wind is blowing.

69. Coal 2017

Global coal demand dropped for a second year in a row in 2016, approaching the previous record for two-year declines set in the early 1990s. Global demand for coal fell by 1.9% in 2016 to 5 357 Mtce, as lower gas prices, a surge in renewables and energy efficiency improvements put a major dent on coal consumption. Demand for coal has now dropped by 4.2% since 2014, almost matching the fall of 1990-1992 which was the largest two-year decline recorded since the IEA started compiling statistics more than 40 years ago.

In 2016, rising coal use in India and other Asian countries was unable to offset large declines in the United States, China (where demand dropped for the third consecutive year) and in the United Kingdom (where demand dropped by more than 50%). In the United States, coal’s dominance in the power sector has been eroded by low gas prices; in China, coal demand has fallen due to lower use in the industrial and residential sectors linked to efforts to improve air quality; while in the United Kingdom a recently introduced carbon price floor has rung the death knell for coal use in power generation.

Coal’s share in the global energy mix is forecast to decline from 27% in 2016 to 26% in 2022 on sluggish demand growth relative to other fuels. Growth through 2022 is concentrated in India, Southeast Asia and a few other countries in Asia. Coal demand declines in Europe, Canada, the United States and China, the largest coal consumer by far, and where IEA forecast a structural but slow decline with some fluctuations linked to short-term market requirements.

Because of these contrasting trends, global coal demand reaches 5 530 Mtce in 2022, which is only marginally higher than current levels, meaning that coal use all but stagnates for around a decade. Although coal-fired power generation increases by 1.2% per year in the period 2016-22, its share of the power mix falls to just below 36% by 2022, the lowest level since IEA statistics began.

Prospects for coal are bleak throughout most of Europe. The future of coal in Europe is increasingly tied to Poland and Germany, which account for more than half of the coal consumed in the European Union. In Poland, demand is forecast to be stable through 2022. In Germany, coal demand declines even as nuclear power is progressively phased out, with coal use remaining highly sensitive to the relative prices of coal, natural gas and carbon dioxide (CO2). The decrease in coal demand forecast in Germany could be accelerated by policy changes.

For most countries in Europe, coal is increasingly becoming a negligible part of the energy mix as a growing number of countries have closed or are closing their coal-fired power plants. Hard coal production in Europe outside Poland drops to marginal levels by 2022; lignite production remains meaningful in a few countries, but with a declining profile that follows power generation trends.

Chinese Premier Li Keqiang has pledged to “Make the skies blue again”. Chinese coal demand declined in 2016 – as it did in 2014 and 2015 – despite an increase in coal-power generation. The main driver for this apparent contradiction was coal substitution in small industrial and residential boilers; higher efficiency in power, steel and cement industries also helped. This sets the scene for the years to come.

Improving air quality has become a major policy priority, and IEA expects more than 100 Mt of coal currently used in the residential and industrial sectors (other than steel and cement) to be replaced by natural gas. Combined with saturation of heavy industry growth, coal demand is
forecast to decline through 2022, despite growth in coal conversion and in coal-power generation. Still, coal supplies over 55% of China’s energy demand in 2022.

A competitive, profitable and safe coal mining sector is critical for the Chinese economy. Whereas policies to maintain profitability of the coal sector in China – together with improving mine safety – have been recent priorities, the sector’s competitiveness is another medium-term objective to avoid burdening the Chinese economy. But cost reductions will be challenging. Closures and mergers of low-productivity mines and transport debottlenecking will push costs down, but will be offset by deterioration of geological conditions, labor inflation and increasing transportation distances. Overcapacity is another concern that needs to be addressed, while taking care of social and regional impacts of mine closures and job losses.

Despite rapid growth in renewables deployment, coal use will continue to rise in India. With a growing fleet of coal power plants running at less than 60% of capacity and robust power demand growth, coal-fired generation is forecast to increase at nearly 4% per year through 2022. Outside the power sector, growth in thermal coal demand is centered in the industrial sector thanks to robust economic growth, as well as in coking coal, thanks to rising steel consumption, housing, railways and steel-intensive industries such as shipbuilding, defense and vehicle manufacturing.

IEA has significantly reduced its forecast for thermal coal imports to India compared with last year’s report in response to government measures to reduce dependence on imports. Many policies to cut imports have been implemented, which IEA expects to have an impact despite the lower quality of domestic Indian coal.

The mood in the coal industry in the United States brightened in 2017. Measures introduced by the Federal government provided optimism to the sector. At the same time, higher domestic gas prices drove higher coal use in the power sector and higher international coal prices boosted exports and revenues for coal companies. Some regulations were reviewed and the financial environment for coal mining improved. The country’s first new coal mine since 2011 was opened in May and other projects were announced.

However, sluggish power demand, abundant gas supply and renewables growth are expected to continue to generate headwinds for coal use and limit the prospects for any resurgence in construction of new coal power plants. As a result, US coal production is forecast to be around 510 Mtce in 2022, equivalent to current levels, while demand declines to 470 Mtce, a drop of 1% per year on average over the period.