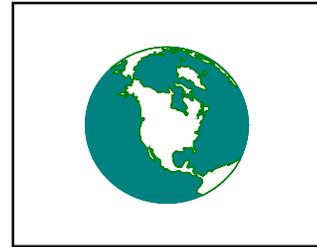


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# CAR LINES

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EUROPE.....	4
1. Debate Over CO2 Limits Coming to a Head.....	4
Carmakers Warn of Job Losses Ahead of CO2 Limit Vote.....	4
European Commission Warns MEPs On Auto-Sector Burden .....	4
T&E: Lack of Chargers Not to Blame for Slow E-Car Uptake.....	5
MEPs Back 45% CO2 Cut for Cars and Vans.....	5
Austrians Steer Divisive Debate on CO2 Cuts for Cars .....	6
2. European Commission Warning as MEPs Push for Higher Truck CO2 Target.....	7
3. New Study Makes Case for Zero-Emissions Freight .....	8
4. EU Parliament Digs in on Truck Emissions Targets .....	8
5. Report: New Petrol and Diesel Car Sales Must End By 2030 To Meet Climate Targets .....	9
6. Frankfurt Must Ban Old Diesel Cars, Court Rules .....	10
7. Merkel Meets Carmakers Over Threat Of Diesel Vehicle Bans In German Cities.....	11
8. Germany Grapples to Find Exit from Diesel-Emissions Crisis .....	12
9. Porsche Will Stop Making Diesel Cars, Focus On Other Technology.....	13
10. Germany To Upgrade Clean Transport Policy .....	14
11. Diesel Tax Plan Sparks Protest From Spanish Carmakers.....	15
12. Report Links Air Pollution to More than 400,000 Deaths Annually in Europe .....	16
13. Report: Poland Must Speed Up Fight Against Smog .....	16
14. Business Leaders Call For Post-Brexit Vehicle Emissions Roadmap .....	17
15. VW Vows to Give Tesla a Fight on Electric Cars, but Not Cash.....	18

16.	Stricter Automobile Emission Tests Come Into Force Across EU .....	18
17.	UK Rolls Out Checks To Catch Truck Emissions Cheats .....	19
18.	Germany Launches World's First Hydrogen-Powered Train .....	19
19.	Meyer Werft Floats AIDAnova, the World's First LNG-Powered Cruise Ship .....	20
20.	Health At Risk From Cruise Ship Emissions, Say Environmentalists .....	21
21.	German Car Giants Face EU Emissions Investigation.....	22
	NORTH AMERICA.....	23
22.	EPA and NHTSA Hold Hearings on GHG/Fuel Economy Rollback Proposal.....	23
	California: "There Is Nothing Safe About This Proposal".....	23
	Representatives Of The Auto Industry Weigh In.....	25
	Health Effects Of Air Pollution Also Must Be Considered.....	25
	Former EPA Staffer Blasts Rollback Plan .....	26
	California Doesn't See Court Fight on Trump Emissions Challenge .....	28
	OMB Completes Review Of 'Amendments' To Vehicle GHG Rules .....	28
	EPA Critics Seek To Preserve Suit Over Vehicle GHG Rule Rollback Finding .....	29
	California Moves To Protect Auto Emissions Rules From Trump Rollback .....	31
	Trump Fuel-Economy Proposal Writes Off Rising Global Temperatures.....	34
23.	Automakers Utilities Aim to Halve Transportation Energy Use by 2050 .....	34
24.	California Advances Electric Vehicle Legislation.....	36
25.	California Pushes Ahead with Promotion of Zero-Emission Vehicles.....	36
26.	CARB Program Will Monitor Air Quality In Communities Near Oil Fields .....	38
27.	California Ports Making Clean Up Progress.....	38
	Los Angeles Already Surpasses 2023 Pollution Reduction Targets.....	38
	Diesel Emissions Down At Port Of Oakland, But Health Risks Still High.....	39
28.	Large Trucks Are Biggest Culprits Of Near-Road Air Pollution .....	40
29.	Auto Emissions Device Maker to Spend \$6 Million in EPA Agreement .....	41
30.	Kavanaugh Touts Environment Rulings, Says He's Not Anti-Regulation .....	41
	ASIA-PACIFIC .....	42
31.	China Forges Ahead In Building Green Future .....	42
32.	China Diesel Demand Gathering Momentum.....	43
33.	China Accelerates EV Strategy With Investments In Clean Energy Firms .....	44
34.	India Wants EVs To Be 15 Per Cent Of All Vehicle Sales In Five Years .....	45
35.	PM Modi Unveils Mobility Road Map, Seeks Investments In E-Vehicles Manufacturing .....	46
36.	10,000 New CNG Stations Planned for India By 2030 .....	47
37.	Australia's Transport Emissions Reportedly Up by 63 % .....	47
38.	New Zealand Government Promises 'Decent' Incentives For Electric Cars .....	48

AFRICA .....	49
39. Nigeria: Air Pollution - Nigeria Ranks 4th Deadliest Globally .....	49
40. Interim Secretariat Of The China-Africa Environmental Cooperation Center Unveiled ....	50
GENERAL.....	51
41. Global Car Sales Hit Speed Bump as Demand Slows and Trade Tensions Loom .....	51
42. United Airlines Longest Biofuel Flight; Pledges To Cut GHG Emissions 50% By 2050 ...	53
43. In 2018, the Use of Electric Buses Will Reduce Fuel Consumption by 233,000 Barrels..	54
44. Cummins Unveils New Emissions-Control Concept; Sees Diesel Remaining Strong.....	55
45. Many Diesel Car Models Eliminated in 2018 .....	56
46. Air Pollution Adversely Affecting Test Scores .....	57
47. Ricardo: Report Shows Life Cycle Analysis Is Crucial For Environment .....	58
48. 26 Entities Commit To Zero Emission Vehicle Targets .....	59
49. How the World's Oil Refiners Plan to Grapple With Their Fuel Oil Output After 2020 .....	60

## EUROPE

### 1. Debate Over CO2 Limits Coming to a Head

#### **Carmakers Warn of Job Losses Ahead of CO2 Limit Vote**

The EU executive has underestimated the level of job losses that could follow a shift towards greater use of electric vehicles, the European Automobile Manufacturers Association said as MEPs prepared to vote on higher CO2 emissions limits for cars and vans. A report commissioned from the consultancy FTI shows the “negative impact” of proposed tighter CO2 emission limits for light vehicles could be greater than foreseen in the European Commission's impact assessment, ACEA argues.

The Commission notes that battery electric vehicles are less labor intensive than those with internal combustion engines, but it “does not explain its assumption on how much lower employment would be required in case of a switch”, FTI says in its review of the documents.

ACEA secretary general Erik Jonnaert said carmakers were “eager to move as fast as they can” towards zero-emissions vehicles. “However, the entire European automotive supply chain will need to transform at a pace which is manageable, protecting employment and the long-term viability of the sector,” he said.

For the campaign group Transport & Environment, however, job losses and productivity increases are inevitable and should not be attributed to a shift to electric vehicles. “The electromobility revolution is happening anyway – the question is not if but where,” the group's clean vehicles director Greg Archer told the press. “If the European Parliament does not vote for more ambitious CO2 targets for new cars, then Europe will be importing electric vehicles made in China instead of making its own,” Archer said.

#### **European Commission Warns MEPs On Auto-Sector Burden**

The European Commission has warned MEPs against creating an unnecessary burden on the automotive industry with proposals to include upstream emissions in new reduction targets for trucks. A draft opinion debated by the transport committee (TRAN) recently on proposals for CO2 reductions for heavy duty vehicles (HDVs) includes an amendment to use a ‘well-to-wheel’ method for emissions accounting.

In her report, opinion rapporteur Henna Virkkunen of the center-right EPP, said reductions would come from several sources, including renewable fuels, which should all be incentivized. To take account of this and ensure more accurate assessment, the Commission “should establish the methodology for the calculation of well-to-wheel emissions by 2022”.

In a speech to the committee read by EPP colleague Wim van de Camp, Virkkunen said the EC's VECTO emissions simulation was not technology neutral.

Director of climate strategy at the Commission's climate action directorate, Artur Runge-Metzger, told the committee the proposals for ‘well-to-wheel’ was “causing serious headache” as it would require VECTO to be expanded to include the fuel sector. “How can that automotive sector be made responsible for emissions that happen before the tank?” he asked.

Runge-Metzger said that emissions from the fuel sector were already being dealt with in other legislation and the proposal risked double-counting which would then require the HDV targets to be radically raised. "It's going to cause a lot of administrative work for the automotive industry ... reporting emissions before the tank," he warned.

The rapporteur said the EC's proposed reduction targets of 15% by 2025 and 30% by 2030 were "very ambitious" but realistic. Auto-manufacturers have said the Commission's proposals were "far too aggressive". It wants 7% by 2025, and 16% by 2030.

A draft report by environment committee which is leading on the file proposes 20% and 45%, but the Commission has warned those targets may not be achievable.

### **T&E: Lack of Chargers Not to Blame for Slow E-Car Uptake**

A shortage of public charging points is not the main factor limiting the uptake of electric cars, the campaign group Transport & Environment said recently as it released a report on European infrastructure.

There are currently five electric vehicles on the road for every public charging point, while the European Commission – which is pushing for increased deployment – recommends a figure of 10, the survey notes.

Moreover, cars are charged at home far more often than on the street or in car parks, with public charging points accounting for only about 5% of recharging sessions, the report notes. "In Northern and Western Europe, where three in four new cars are sold and the chicken and egg dilemma has been resolved, the primary bottleneck in growing the market for electric cars is not the lack of recharging but the lack of cars to plug-in," the report states.

T&E accused car makers – whose representatives have cited a lack of charging infrastructure for hampering the roll-out of electric cars on the European market – of using the charging point argument as a "smokescreen" to hide a reluctance to pour more resources into marketing electric cars.

The report comes ahead of a vote when the European Parliament's environment committee will adopt its position on proposals to tighten CO2 emissions standards for cars and vans post-2020, which carmakers warned could lead to huge job losses. "The question is whether carmakers will be pushed to supply electric cars through ambitious CO2 reduction targets for new cars in 2025 and 2030," said Greg Archer, clean vehicles director at T&E.

Only one-in-60 cars sold in the EU in the second quarter of this year was electrically chargeable, despite a near doubling of year-on-year of sales of hybrid and battery electric cars, according to figures released by the European Automobile Manufacturers Association (ACEA).

### **MEPs Back 45% CO2 Cut for Cars and Vans**

The low-emission vehicle sector is set to receive a boost after the European Parliament's environment committee backed ambitious plans to reduce CO2 emissions from cars and vans by 45% by 2030. The report on reducing CO2 emissions from cars and vans, produced by Maltese social democrat lawmaker Miriam Dalli, was adopted by 38 votes to 23 with seven abstentions.

The draft rules would also set an interim goal of a 20% reduction by 2025. The plans would revise the European Commission's draft targets of a 15% reduction by 2025 and a 30% cut by 2030 compared to 2021 levels.

MEPs also voted for a stronger sales target for zero and ultra-low emission cars of 20% in 2025 and 40% in 2030, with penalties for failing to meet these targets. Under the plan, carmakers would be able to lower their overall targets by selling more low-emission vehicles.

The ENVI committee also backed plans for a post-2030 emission reduction target for cars and vans, and a car labelling plan so that consumers could identify green cars.

There was also support for the new real driving emissions test (RDE) for measuring NOx pollution and ultrafine particles, which will complement the world harmonized light vehicle test procedure – a lab test.

Speaking at a press conference, Dalli said that the vote was “a pragmatic result” and the headline figures were a “compromise between all of the different interests involved”. She noted that “some had wanted a reduction figure of 20% by 2030 and some wanted a higher figure of 75%” and acknowledged that the latter figure was needed for the EU to adhere to its climate commitments.

She also explained that the EU was not “promoting one technology over the other” and that a range of technologies including battery-run vehicles, plug-in hybrids, and fuel-cell technology needed to be promoted.

However, the European Automobile Manufacturers Association (ACEA) criticized the result from the ENVI committee. Erik Jonnaert, ACEA's secretary general, said: “The extremely stringent reduction levels adopted are totally unrealistic, as they would require a massive and sudden shift to electromobility.”

He added that the framework conditions for this “seismic shift” were not in place and consumers were not ready to “go fully electric at this stage”.

Plenary is due to vote on Dalli's report in the first week of October. If approved, EU lawmakers are set for tough talks with the bloc's 28 governments on a final law, as nations with big car industries fear stricter rules could cost growth and jobs.

### **Austrians Steer Divisive Debate on CO2 Cuts for Cars**

The EU Council's Austrian presidency has proposed increasing the Commission's proposed target to cut CO2 output from 30% to 35% by 2030. According to a leaked document the proposed figure is “to be discussed further” at the ministers' meeting next month on 9 October.

Member states' positions range from targets as low as 20% to as high as 70%.

A small group of countries consider the Commission's 2025 target already “challenging enough for the manufacturers”, due to the “potential negative effects on jobs and competitiveness and cost for consumers”.

Others “have throughout called for raising the ambition level”, mostly for the 2030 target. This “would also promote innovation and competitiveness”, particularly “in light of the national targets set out in the Effort Sharing Regulation” and in the Paris agreement, the leaked document says.

Carmakers have long advocated a 20% 2030 target.

The Austrian presidency is sticking to proposals for half the 30% reduction to be achieved by 2025.

MEPs are set to vote in plenary 3 October, after a recent push for ambitious targets.

Meanwhile, the EC published a 'non-paper' on the impact of the regulation, warning of the "economic costs" of ambitious targets. Environmentalists criticized the content and timing of the findings as an attempt to exert political influence.

## **2. European Commission Warning as MEPs Push for Higher Truck CO2 Target**

Members of the environment committee (ENVI) met recently to discuss their draft report on Commission proposals for the first ever CO2 reduction targets for heavy duty vehicles (HDVs). The draft report by rapporteur Bas Eickhout (Greens/EFA) proposes binding reductions of 20% by 2025 rather than the 15% of the Commission, and 45% rather than 30% by 2030, subject to review.

Auto-manufacturers' organization ACEA has said the Commission's proposals, based on improvements compared to average performance in 2019, were "far too aggressive". It wants a 2025 target of 7%, and 16% by 2030.

The Commission had not fully looked at its own impact assessment, Eickhout said, which showed existing technologies made 15 to 20% possible by 2025. "If you say 15-20% is achievable you should also go for 20%", he said.

If the calculation were to include expected development of zero-emission HDVs by 2023-25, he added, "you can even go beyond 20%". "I could even say my proposal is very modest," he said.

Director of climate strategy at EC's climate action directorate Artur Runge-Metzger said the impact assessment showed 20% by 2025 was only achievable if all manufacturers had access to all the necessary technology at the same time, which the Commission was "not quite sure" will happen. "So, we think 15% is ambitious," he said.

Cleaner trucks officer at campaign group Transport & Environment, Stef Cornelis, told reporters the impact assessment showed 20% was possible with technology available today. Cornelis said Eickhout's report was a "big step in the right direction" and "a clear statement the rapporteur intends to shift away from diesel".

Cornelis welcomed Eickhout's proposal to replace the Commission's 'super-credit' incentive - where zero and low emission vehicles (ZLEVs) would count towards CO2 targets - with a minimum production mandate.

Eickhout said super-credits would weaken the targets and the EC's impact assessment recognized a binding mandate could "provide the strongest regulator signal for industry to invest".

ACEA supports super-credits, but with no cap for at least 2019-2025.

EPP shadow rapporteur Christofer Fjellner said a mandate meant “going all in for electric”, while electric trucks do not yet exist. On the targets, Fjellner backed the Commission proposal.

### **3. New Study Makes Case for Zero-Emissions Freight**

A concerted push towards deploying zero-emission trucks on Europe's roads could reduce oil imports by a billion barrels by 2030 and create 120,000 new jobs, according to a study commissioned by the European Climate Foundation. The report is published as EU lawmakers debate a proposal that would force manufacturers to reduce CO2 emissions from new vehicles by 15% by 2025 and aim for a 30% cut by the end of the next decade.

“This analysis demonstrates that the shift to low-carbon freight transportation has benefits for the European economy, alongside the clear environmental benefits of the transition,” said Jon Stenning, associate director of Cambridge Econometrics, which produced the report.

The study concludes that expected improvements in diesel engines could bring about a 30% reduction in per kilometer emissions by the late 2020s, but the efficiency gains would tail off from there on. It models scenarios based on widespread uptake of battery electric vehicles, trucks running on hydrogen fuel cells, and a system of overhead cables providing electricity to vehicles directly.

Extending the model to 2050, the analysts concluded that extensive uptake of vehicles powered by renewable electricity could achieve an emission cut of more than 80%, double what is thought possible by further improving diesel technology.

“Electrification of trucks in Europe will be paramount for reaching the Paris agreement and it is reassuring to find that this change will not only bring about great environmental benefits but also gains in GDP and jobs,” said Anders Berger, director of public affairs for Volvo, which contributed to the study.

### **4. EU Parliament Digs in on Truck Emissions Targets**

Europe's automakers are gearing up for a political struggle with European Union parliamentarians as both sides debate a proposal to drastically decrease carbon-dioxide emissions from EU-made trucks. A regulation proposed in May by the European Commission, the EU's executive branch, is designed to cut the CO2 emissions of new heavy-duty vehicles supplied to the EU by 15% by 2025 and 30% by 2030.

The law may cover trucks of 3.5 tons or more, and passenger vehicles seating more than eight people, after an anticipated review in 2022.

With the proposal now being debated within the European Parliament, the European Automobile Manufacturers' Assn. (ACEA) has released a note criticizing it as unrealistic, given the technical demands and required lead-in times. An ACEA spokesperson said the proposed EU targets are “far too aggressive,” given the state of the EU truck market and industry.

“The product development of heavy-duty vehicles to be sold in 2025 is already under way right now,” the spokesperson says. “The 2025 ambition level is too stringent, given the short lead time for this first-ever CO2 target.”

The ACEA official contends that in any case, the commission should have waited before writing its proposal until new Vehicle Energy Consumption Calculation Tool data became available, which will not happen until next year.

ACEA's skepticism is matched by the parts makers' organization, the European Association of Automotive Suppliers (CLEPA), whose spokesperson finds the feasibility of the proposal to be "highly doubtful." She recommends the targets be lowered to a 10% reduction in 2025 and 20% in 2030.

What is tough to argue is that buses and trucks should not play a part in reducing CO2 emissions. According to the European Environment Agency, heavy-duty vehicles accounted for 18.8% of EU transport emissions, which in total created 25.8% of the 28-member countries' greenhouse-gas emissions.

But to the automotive industry, European heavy-duty vehicle manufacturers are world leaders in improving their trucks' environmental performance and have dramatically reduced pollutant emissions. "On average, EU manufacturers have managed to cut CO2 emissions by 1% per year," the ACEA spokesperson said.

CLEPA's spokesperson says one benefit of emissions-reduction technology could be cuts in fuel costs, which today account for up to one-third of goods-haulers' costs. This certainly is a plus point for the European Commission as it pushes its plan, with a note stating it could allow small- and medium-sized enterprises (SMEs) in the transport business "to save €25,000 (\$28,873) per vehicle in fuel savings the first five years of use, against an increase in the initial price of the vehicle of less than 2% of its total cost."

But as bad as ACEA finds this proposal, it could – as far as automakers are concerned – end up being worse, given that the European Parliament (EP) – the EU's directly elected legislative body – wants stricter CO2 emission standards for new trucks than those proposed by the commission.

Bas Eickhout, the lead EP negotiator and a Dutch Green MEP, says in a draft report on the proposal that a 20% target is possible now with existing technology. "My very modest proposal also includes a specific mandate" that new buses should be zero-emission by 2030, he told an August 29 meeting of the Parliament's environment committee in a first discussion before an Oct. 18 vote on his amendments to the proposal.

Eickhout says he is offering "some flexibility" over time frames in his proposals. Manufacturers failing to meet 2025 targets must "overachieve" the 2030 ones, he suggests.

But Swedish MEP Christofer Fjellner, of the center-right European People's Party, says the commission timeline is too strict, Eickhout's solution is "premature" and later targets are "more feasible."

The commission, for its part, argues a targeted 30% reduction by 2030 should save some 54 million tons of CO2 from 2020 to 2030, equivalent to Sweden's annual emissions. A representative told MEPs the proposal's ambitious targets would decrease CO2 emissions while ensuring European manufacturers "stay at the forefront of competition."

## **5. Report: New Petrol and Diesel Car Sales Must End By 2030 To Meet Climate Targets**

New petrol and diesel car sales in Europe must be phased out before 2030 if the auto sector is to play its part in holding global warming to the Paris agreement's 1.5C goal, a new analysis has found. Forecourt plug-in hybrids will also have to disappear by 2035 at the latest, according to analysis by the German Aerospace Centre (DLR), commissioned by Greenpeace.

Vehicle emissions have barely changed over the last decade and the industry will exhaust its carbon budget within five to 10 years unless there is a radical shift, the DLR scientists say. "Auto CO<sub>2</sub>-emissions need to peak as soon as possible," Prof Horst Friedrich, DLR's director, told the Guardian. "Looking at the dwindling carbon budget it is crucial to push low-emitting cars into the market, the earlier the better, to renew the fleet."

The study warns that "stark measures" would be needed to do this with a 66% chance of meeting the 1.5C goal – including a drop in conventional car sales from around 15m this year to 5m in 2022. Under this scenario, the last vehicle with an internal combustion engine would be sold in 2028 and diesel and petrol powered-cars would be banished from the roads by the mid-2040s.

Behavioral change towards walking, cycling and public transport would also be necessary.

"It would be much easier to keep a 2C target because there is a higher carbon budget and therefore more time to implement the necessary measures," Friedrich said. "I estimate it could provide us with up to 10 years more time to prepare much better for the fundamental transformations necessary."

A draft report by the UN Intergovernmental Panel on Climate Change makes clear that 2C of warming would expose around 10 million more people in coastal areas to floods, storm surges and crop damage than 1.5C would. Global sea levels would also rise by an extra 10cm, heatwaves would be longer, extreme weather events stronger, economic growth lower, while crop yields and water availability would substantially decline.

The UK government has announced that sales of all new petrol and diesel vehicles will be banned by 2040, while some countries including Germany, Ireland, India and the Netherlands have set a more ambitious deadline of 2030.

Some analysts also believe that Europe's car manufacturers have made no real-world improvement in auto CO<sub>2</sub> emissions for five years, because of the "gaming" of emissions tests.

A spokesperson for the European Automobile Manufacturers Association said: "It is still hard to predict whether the alternative powertrains will have gained a significantly high market share by 2030. This is dependent on factors that are outside the control of automobile manufacturers, such as the necessary recharging infrastructure being in place as well as appropriate incentives."

## **6. Frankfurt Must Ban Old Diesel Cars, Court Rules**

The western German city of Frankfurt must introduce a ban on diesel vehicles, a court has ruled. Environmental activists had sued the state of Hesse for allowing Germany's financial capital to exceed maximum safe levels of nitrogen oxide.

The German administrative court in Wiesbaden ruled in favor of the group Deutsche Umwelthilfe (DUH, known in English as Environmental Action Germany), and ordered Hesse to bring the city into line with regulations by banning high polluting diesel vehicles from parts of the city. DUH

bought the case after February's landmark ruling by the Constitutional Court that allowed for inner-city diesel bans.

Several German cities have now planned to, or have already started imposing partial diesel bans, including Hamburg and even Stuttgart, home to Daimler and Porsche. Other cities including Aachen and Düsseldorf are also considering bans.

Germany has launched a scheme to retrofit its diesel public buses with exhaust-scrubbing systems and introduce charging points to encourage drivers to switch to e-cars. Still, environmentalists say that's not enough. They want all diesel vehicles — including private cars — retrofitted or taken off the road.

The Wiesbaden court ruled that from February 2019, Frankfurt must ban diesel cars of Euro-4 emission standards or worse, as well as petrol cars of Euro-1 and 2 standards. Euro-5 diesels must be banned from next September. If upheld, the ruling would affect about a quarter of the cars registered in Frankfurt, as well as countless commuters and visitors from the surrounding area.

"The driving ban is necessary because all other measures considered by the state will not lead to a significant reduction of nitrogen oxides emissions in an appropriate time," said presiding judge Rolf Hartmann.

DUH argued that the only way Frankfurt could meet its European Union obligations on nitrogen oxide and dioxide pollution was to ban older diesel vehicles. "We need to understand that this is about a threat to our health," the DUH lawyer said in his opening remarks.

The court did not specify which areas would be affected by the new driving ban, but the judge suggested basing it on the existing borders of the environmental zone, which many German cities use to ban heavily polluting vehicles.

The ruling is not yet binding. Hesse's Minister President Volker Bouffier and Environment Minister Priska Hinz demanded the federal government act to legislate a retrofit of older diesel cars with filtering systems. "We do not want driving bans, but instead a fundamental solution to the problem," Klaus Oesterling, a Social Democrat and the head of Frankfurt's traffic department, told DPA news agency.

"Driving bans for older diesel vehicles represent a drastic reduction in the overall urban traffic system to an extent not previously known," he said. He lamented that the municipality and its citizens now had to "pay for the failures of the automobile industry and also for the failures of the federal government."

There will be some exceptions for diesel cars used by disabled individuals, and owners of delivery vans and other large vehicles may have to pay fees to enter the areas covered by the ban.

The ruling can be appealed, which may delay implementation of the bans. Appeals court proceedings usually take at least one year.

## **7. Merkel Meets Carmakers Over Threat Of Diesel Vehicle Bans In German Cities**

Chancellor Angela Merkel met auto makers recently to discuss additional measures, including engine retrofits, to avoid large-scale diesel vehicle bans in German cities. Such a shift would mark

a striking change of mind by the German leader in the debate sparked by revelations of industry-wide emissions fraud in 2015.

Until now Dr Merkel has opposed retrofitting engines as too costly – an estimated €3,000 per vehicle – and too slow a solution for air quality in German cities, many of whom are in breach of European Union guidelines. Instead she backed the industry solution for cheaper – and less effective – software updates. In addition, German cities have introduced their own measures including speed limits on major traffic arteries and promises to buy cleaner buses - in a bid to bring air quality within EU limits.

But German environmental groups have taken dozens of cities to court and judges have already imposed the first bans on diesel vehicles. With further court-ordered bans looming, affecting millions of German commuters and businesses, Merkel allies facing state elections in Hesse and Bavaria are getting nervous.

Earlier this month a court ruled that Frankfurt, the largest state in Hesse, must ban polluting older diesel and petrol vehicles from the city center from February to improve air quality. (See story above.)

“We want that the federal government creates the conditions so that engine retrofits can take place at the cost of the manufacturer,” said Mr Volker Bouffier, Hesse state premier and a senior member of Dr Merkel’s ruling Christian Democrats (CDU), seeking re-election next month.

Dr Merkel has told her federal transport minister Andreas Scheuer, from her Bavarian sister party CSU – also facing re-election in October – to find a way to make older diesel vehicles cleaner while avoiding large-scale bans. While the chancellor has reportedly changed her mind in favor of retrofits, Mr Scheuer is said to favor upgrade incentives.

But it is unclear who – industry or taxpayer – would finance either retrofits or new car incentives. Germany’s federal environment agency (UBA) has expressed doubts over the efficacy of replacing older cars.

An internal UBA study found that taking older cars off the road would reduce nitrogen oxide pollution – a key pollutant in diesel emissions – by only 0.7 micrograms per cubic meter. This would make barely a dent in overall pollution levels of between 73 and 78 micrograms in cities such as Stuttgart or Munich – almost twice EU limits of 40mg per cubic meter. The UBA paper said building selective catalytic reduction (SCR) systems was the only way to avoid driving bans.

At the meeting, politicians and car executives were also expected to discuss which diesel standard should be included in the measure. Pre-meeting reports suggested the measures would focus on so-called Euro-5 standard from 2010 and not the newer Euro-6 standard. “But there are six million Euro-6 diesels of which an estimated 80 per cent have emissions above emission limits,” said Prof Ferdinand Dudenhöffer, auto analyst with the university of Duisburg-Essen.

## **8. Germany Grapples to Find Exit from Diesel-Emissions Crisis**

Germany’s government is preparing a second round of potentially costly measures to reduce pollution from diesel vehicles as the country struggles to come to terms with excess emissions three years after Volkswagen AG admitted to cheating.

With cities like Stuttgart and Frankfurt poised to impose driving bans because of excessive levels of smog-causing nitrogen oxides, Chancellor Angela Merkel's government is under increasing pressure to come up with a solution.

"The quick and overall better way is to replace the old fleet with a new one," Merkel said September 27 at a town-hall event in Augsburg, Germany. "In addition, the door can be opened for retrofits on some vehicles. And if and when that happens, we believe the customer shouldn't have to pay for it."

Merkel was to meet September 28 with her ministers for transportation, finance, economy and the environment to hammer out a new plan. If there's a deadlock, the heads of the coalition parties will gather Oct. 1 to seek a compromise.

Automakers, including BMW AG and Daimler AG, are expected to play along, even though the government has little legal leverage because the vehicles were properly certified. The manufacturers are keen to avert driving bans as the incessant debate is causing consumers to shy away from diesel technology, which is profitable, secures German jobs, and helps meet tighter environmental regulations.

"The carmakers caused the diesel crisis," Environment Minister Svenja Schulze said on Twitter. "That's why they need to finance the solution."

Here are the three main options:

#### 1. Trade-In Incentives

This is the plan preferred by automakers as it deals with the pollution problem by promoting sales of new models. For the government, it's good because it's a quick fix. The incentives need to be generous enough to get a hefty uptake. Last year, car manufacturers offered rebates, such as 2,000 euros (\$2,317) on a new BMW. That means more could be expected this time around.

#### 2. Hardware Fix

Politicians, including Environment Minister Schulze, are calling for automakers to bolster emissions systems on older vehicles by installing new hardware such as tanks for urea, which neutralizes nitrogen oxides. While that could reduce pollution on the road, developing, certifying, and installing the equipment would be complex and take time. Carmakers and Transport Minister Andreas Scheuer warn that costs could exceed estimates of 1,400 to 3,300 (\$1670 to \$3825) euros per car. Still, some type of hardware fix will likely be part of the package.

#### 3. Buybacks

The government is considering allowing customers to return an older diesel for its current value plus a bonus. This would be the worst-case scenario for automakers, as customers could use that money to buy a vehicle from another brand or pocket it and take the bus. This is unlikely as it would prompt stiff resistance from Germany's manufacturers.

### **9. Porsche Will Stop Making Diesel Cars, Focus On Other Technology**

Porsche AG has announced it no longer will manufacture cars with diesel engines in wake of the emission-cheating scandal involving its own models and parent company Volkswagen. Porsche,

which has been making the diesel engine version for 10 years, plans to concentrate on petrol/gasoline, hybrid and all-electric vehicles.

"Porsche is not demonizing diesel," Oliver Blume, CEO of Porsche AG, said in a press release. "It is, and will remain, an important propulsion technology. We as a sports car manufacturer, however, for whom diesel has always played a secondary role, have come to the conclusion that we would like our future to be diesel-free."

By 2022, Porsche said in a press release it will have invested more than \$6 billion in electric cars, which it calls e-mobility, in "creating the basis for sustainable growth into the future." Porsche plans to bring its first purely electric sports car to the market in 2019 with the Taycan model. And by 2025, every second new Porsche vehicle could have an electric drive -- hybrid or purely electric, the company said.

The sports car manufacturer also said it is concentrating on optimized internal combustion engines. "Purist, emotional and powerful sports cars will thus continue to play an important role in the Porsche product portfolio," the company said.

"Our aim is to occupy the technological vanguard -- we are intensifying our focus on the core of our brand while consistently aligning our company with the mobility of the future."

Nearly 60,000 Porsche SUVs in Europe were recalled, a third of them in Germany, because of emissions cheating. Germany's Federal Transport Authority order affected Cayenne and Macan diesel vehicles.

Porsche had used diesel engines from Audi, another VW subsidiary. "We have never developed and produced diesel engines ourselves," Blume said. "Nevertheless, Porsche's image has suffered. The diesel crisis caused us a lot of trouble."

Porsche's executives were allegedly aware of the so-called "defeat devices" being used by Audi engines to deliver misleading emissions figures during tests.

Soon after the Dieselgate scandal emerged in 2015, Porsche CEO Matthias Muller moved up to become head of VW, replacing the now-indicted Martin Winterkorn. Later Herbert Diess assumed leadership of VW.

## **10. Germany To Upgrade Clean Transport Policy**

The German government has announced that it will create a taskforce to table a sustainable transport plan by the end of 2018 outlining how the country can meet its transport emission reduction goals. Germany's new National Platform for the Future of Mobility (NPM) taskforce will replace the previous one, the National Platform for Electric Mobility (NPE).

The initiative will focus on electric cars, alternative fuels, digitalization, an industry regulatory framework and employment. Besides national and regional officials, the platform will include industry, NGO and union representatives. The taskforce is intended to develop proposals on how to reach the official target of cutting emissions in the transport sector by 40 to 42% by 2030 compared to 1990 levels.

According to Henning Kagermann, who leads both bodies and is an adviser to chancellor Angela Merkel, the increasing market share of electric vehicles is "not self-perpetuating". Kagermann has

asked the government to maintain purchase subsidies for new clean vehicles, which range from €3,000 to €4,000, and for investments to enable up to 3.5 million private charging points by 2025.

Kagermann predicted that battery-powered transport will see outstanding global growth, up 25% by 2025. He also called for preferential treatment for cleaner cars such as free parking and access to bus lanes.

Environmentalists welcomed the new initiative but warned against the government's efforts to oppose further emission cuts at EU level. If the government does not shift its position "it would reduce the work of the NPM to absurdity" said Leif Miller, head of the conservationist NABU, which will join the taskforce.

The EU is currently discussing emissions cuts for cars and vans, with the ball currently in the court of the Council's Austrian presidency after a European Parliament push last week.

Germany is running short of its planned target of 1 million electric cars on the roads by 2020, according to the latest NPE report. The target was set in 2009 by Merkel to overcome foreign competition, mainly from China's car giant BYD and the US carmaker Tesla. On Tuesday, it emerged that German car giants face an EU anti-trust inquiry for collusion in restricting cleaner systems.

## **11. Diesel Tax Plan Sparks Protest From Spanish Carmakers**

The announcement by Spain's prime minister that a new tax on diesel will be included in the 2019 budget provoked a call for "prudence, considered analysis and dialogue" from Spain's vehicle manufacturers association ANFAC. In a radio interview prime minister Pedro Sanchez described diesel as "a highly polluting fuel" and promised that "the energy transition, especially regarding private transport, will be reflected in a rise in taxation".

Tax on diesel in Spain currently represents 47% of the consumer price, the third lowest rate among EU states behind only Luxembourg and Bulgaria, according to European Commission data.

Nuria Blázquez of the NGO Ecologistas en Acción said introducing a diesel tax would end the practice of subsidizing the most polluting fuel and "give an important signal to the car industry as well as flag up the policy intentions of the government".

"Political statements against diesel harm sales and consumers," an ANFAC spokeswoman told the press. According to ANFAC, diesel "has lost six per cent of market share so far this year and recently-purchased cars are drastically losing their resale value".

Industry minister Reyes Maroto, who appeared to cast doubt on the government's intention to levy a diesel tax, issued a statement later giving her "full support to the prime minister" for the inclusion of diesel taxation in the 2019 budget.

The industry ministry's sensitivity to the concerns of Spain's car industry, the second largest in the EU, was reflected in a decision, announced previously, to allow a transition period till the end of 2020 for the full application of more stringent WLTP emissions values for cars. This will "make more gradual the fiscal impact of the new procedure and promote vehicle renovation", the ministry said.

According to Nuria Blázquez, similar measures have been under consideration in France and Germany and “it seems no coincidence that the principal car manufacturing powers should be approving measures of this sort”.

## **12. Report Links Air Pollution to More than 400,000 Deaths Annually in Europe**

Air pollution causes more than 400,000 premature deaths across Europe every year according to a new report from the European Court of Auditors (ECA). Air pollution is now the ‘biggest environmental risk’ in Europe the report added.

Report authors condemned the EU for failing to implement much-needed monitoring and enforcement of air quality regulations to reduce the harm done by poor air quality. “Air pollution is the biggest environmental risk to health in the EU,” Janusz Wojciechowski, the ECA member, who led the report, said in a statement.

“In recent decades, EU policies have contributed to emission reductions, but air quality has not improved at the same rate and there are still considerable impacts on public health,” he added. While small measures have been made, not enough is being done to tackle the increasing problem.

The report found that EU air quality guidelines are often “much weaker than the World Health Organization guidelines and what the latest scientific evidence suggests.”

The research shows that particulate matter, nitrogen dioxide, and ground-level ozone are the air pollutants responsible for most of the early deaths. But that the levels of these damaging pollutants may be being underestimated due to inadequate measuring techniques.

Urban areas experience the worst of the pollution; urban dwellers are at risk of respiratory disease, cancers, liver and blood disease and cardiovascular disease when exposed to high levels of pollution for an extended period of time.

The ECA also noted that action taken by the European Commission against member states ignoring emission limits has not been effective. “Despite the Commission taking legal action against many member states and achieving favorable rulings, member states continue to breach air quality limits frequently,” the auditors said.

Other organizations have used the report to bring air pollution topics back to the forefront. “The new report is yet another wake-up call for the EU to seriously tackle the air pollution crisis we face every day,” Yoann Le Petit from Transport and Environment, an organization campaigning for cleaner transport in Europe, said. “Too many member states put their efforts into hiding the real extent of the problem from their citizens rather than cleaning up the air,” he added.

The report ends with an urgent call for more funding to be made available for initiatives to cut air pollution, indicating that such projects must be “well targeted.”

## **13. Report: Poland Must Speed Up Fight Against Smog**

Polish institutions are not acting fast enough to improve air quality in Poland, which is among the worst in Europe, the country’s Supreme Audit Office (NIK) report showed recently. Cities in Poland, especially in the south, sometimes have denser smog than New Delhi or Beijing, mostly due to citizens burning low quality coal and rubbish to heat their houses.

Poland has taken steps to improve air quality, including imposing a special anti-smog heating tariff and adopting new coal quality standards. But NIK and environmentalists said the solutions had loopholes and are inconsistent with the government's general 100-billion zlotys "clean air" program announced this year.

NIK, which reports to the Parliament and has been run by Krzysztof Kwiatkowski since 2013 when the former government was in power, said that if Poland fights smog at the current rate it will take up to 100 years for some areas to achieve the required levels.

"Poland still has one of the worst air qualities in the European Union," NIK said, criticizing the energy ministry and environment ministry for failing to take steps adequate for the size of the problem. "The energy ministry's proposal regarding quality standards for solid fuels secures to a much greater extent the interests of the coal lobby, than striving to protect Poles and the environment from the negative effects of air pollution," it said.

The European Environment Agency says pollution leads to more than 44,000 premature deaths in Poland a year. Polish government officials have downplayed the issue of smog before, with the energy minister saying pollution does not cause premature death.

#### **14. Business Leaders Call For Post-Brexit Vehicle Emissions Roadmap**

On September 11<sup>th</sup>, a coalition of leaders from business, politics and civil society called for "much greater clarity" on how vehicle emissions will be reduced post-Brexit, on the same day that the UK Government was hosting the world's first zero emission vehicles summit in Birmingham.

In a new briefing paper<sup>1</sup>, the Aldersgate Group has pressed ministers to seize the opportunity for Britain to become a global leader in the low-emission vehicle sphere – an industry that the Group predicts will be worth £1-2trn a year by 2030 and as much as £7.6trn a year by 2050.

The paper argues that the need to decarbonize the UK's carbon-heavy transport sector is now "urgent", and that the opportunities for doing so are "ample". It refers to Nissan's Sunderland manufacturing plant, which produced 20% of all-electric vehicles (EVs) sold in Europe in 2016.

"Significantly cutting emissions from road transport is both an urgent environmental imperative and a unique economic opportunity for the UK," Aldersgate Group's executive director Nick Molho said. "We will only get there however if the Government provides much greater clarity on how vehicle emissions need to reduce in the 2020s, provides stable grant and tax incentives to drive consumer demand and stands ready to take the necessary measures to ensure that manufacturers play their part in meeting the public and business demand for clean vehicles."

In order for the UK to reap the benefits of the EV revolution, the paper recommends that ministers should first clarify whether UK will remain part of the current EU regulations surrounding car, van and heavy goods vehicle (HGV) emissions after Brexit. It additionally suggests that mandatory zero-emission vehicles sales targets should be introduced "as a backstop" to bridge any gaps in legislation.

The paper also urges the Government to extend Britain's current range of plug-in car and van grants until EVs become cost-comparable to diesel and petrol vehicles – a cost reduction it claims

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<sup>1</sup> "Driving Ambition: Accelerating the Transition to Zero-Emission Vehicles"

is unlikely to happen until the mid-2020s. The Government is currently committed to maintaining the grants at their current rates until the end of next month, with consumer incentives “in some form” set to continue post-2020.

In addition to the recommendations around grants and Brexit plans, the briefing paper reasons that policymakers should introduce a sustainable road tax system to incentivize drivers to make the EV switch. It argues that increased rates of tax on diesel and petrol vehicles, coupled with tax breaks for zero-emission alternatives, would also encourage a shift from road to rail in the freight shipping sector.

And when it comes to EV charging, the Aldersgate Group recommends that ministers should accelerate the current roll-out of charging infrastructure at a pace that will provide public charging points for 100% of new EV sales by 2030. Specifically, the paper states that public funding to support EV infrastructure should “be targeted where the market will not deliver”, such as in rural areas. It additionally calls for the introduction of regulatory standards on smart charging, compounded by guarantees against the unknown cost of connecting the chargers to the electricity grid.

The Aldersgate Group paper was released to coincide with the international Zero-emission Vehicle Summit, which was taking place in Birmingham. Following on from the release of the Government’s Road to Zero strategy in July, the Summit saw ministers, industry leaders and sector representatives convening to champion low-carbon mobility.

### **15. VW Vows to Give Tesla a Fight on Electric Cars, but Not Cash**

Volkswagen AG is gearing up to go toe-to-toe with Tesla Inc. in a fight for electric-car buyers, putting its money in a wave of new vehicles rather than buying shares in its California-based rival. “There is no substance” to a report that Volkswagen was in discussions about investing in Elon Musk’s effort to take Tesla private, VW’s chief financial officer Frank Witter said in an interview. “We should and do take them as a serious competitor, but we rely and trust in our ability” to roll out battery-powered models starting with the Audi e-tron later this year. The Wall Street Journal reported last month that Volkswagen had been one of the investors bankers lined up by Musk.

Audi’s first electric car will be followed by the Porsche Taycan before the namesake VW brand introduces a series of vehicles designed for the mass market. The 12-brand German auto giant has been aggressively pushing into electrics in the aftermath of the diesel-cheating scandal.

While the Wolfsburg-based manufacturer expects Tesla to overcome issues with hitting production targets on the mainstream Model 3, Volkswagen’s focus is on ramping up its own electric vehicles rather than taking on acquisitions, Witter said, adding that executing on the rollout will help lift its sagging share price. “We need to unleash the value” by improving cooperation among the company’s brands and showing that the group can handle the shift to the electric technology, Witter said. “People need to get comfort that the transition will be managed successfully. We believe we will convince the investor.”

### **16. Stricter Automobile Emission Tests Come Into Force Across EU**

Stricter emissions tests for all new cars in the European Union went into force on September 1. This is in response to the 2015 Volkswagen emission scandal, in which some of its diesel cars were rigged to fool tests while actually emitting illegal levels of pollutants in real driving situations.

The new controls are part of the Worldwide Harmonized Light Vehicle Test Procedure (WLTP). They are designed to measure emissions using real driving data, rather than a theoretical driving profile, which was the basis for previous tests, the EU said.

The EU's roll-out of WLTP began one year ago, affecting all car models that were being introduced to the market for the first time. As of September, the rules apply to every new car for sale.

"In the last three years since the emissions scandal broke out, we've cardinally changed the rules of the game to prevent emissions cheating, protect our public health and the environment, and boost our industry's global competitiveness," EU Industry Commissioner Elzbieta Bienkowska said in a statement.

"Stronger emissions tests are a key piece of the puzzle," she said.

The German car industry has criticized the EU-mandated tests, saying the change has taken place too fast and warning they could result in damaging production shortfalls.

Earlier this year VW blamed production bottlenecks on the tests, while BMW temporarily stopped production of some models with gasoline engines in order to make them compliant. BMW said in July it had largely completed the transition to WLTP.

### **17. UK Rolls Out Checks To Catch Truck Emissions Cheats**

Enforcement staff from the U.K.'s Driver and Vehicle Standards Agency (DVSA) have started to check trucks for emissions cheat devices. In a statement, the government said that cheat devices cut the cost of operating a vehicle whilst at the same time giving false emissions readings. This, the government added, can mean that excessive emissions are released into the atmosphere.

Emissions cheat devices can range from illegal engine modifications to removing a vehicle's diesel particulate filter or trap. Additionally, drivers can use devices that have been designed to stop an emissions control system from working and remove or bypass the exhaust gas recirculation valve.

If a driver is caught using an emissions cheat device or a faulty emission control system, they will be given 10 days to remove the device or undertake repairs to their system. If they carry on using the device or do not repair the system, they can be hit with a £300 (\$385) fine or have their vehicle removed from the road.

A follow up investigation will be undertaken with the operator of the vehicle. The DVSA can, in some circumstances, refer its findings to the Traffic Commissioners for Great Britain — licensing and regulating operators for heavy goods vehicles — who can in turn take away a company's license to operate.

"DVSA's priority is protecting the public from unsafe drivers and vehicles," Gareth Llewellyn, the DVSA's chief executive, said in a statement. "A vehicle doesn't have to be falling apart to be unsafe - any driver or operator who uses cheat devices to get around emissions rules is putting the health of the entire nation at risk," he added.

### **18. Germany Launches World's First Hydrogen-Powered Train**

Germany has rolled out the world's first hydrogen-powered train, signaling the start of a push to challenge the might of polluting diesel trains with costlier but more eco-friendly technology.

Two bright blue Coradia iLint trains, built by French TGV-maker Alstom, recently began running a 62 mile (100km) route between the towns and cities of Cuxhaven, Bremerhaven, Bremervoerde and Buxtehude in northern Germany – a stretch normally plied by diesel trains.

“The world's first hydrogen train is entering into commercial service and is ready for serial production,” Alstom CEO Henri Poupart-Lafarge said at an unveiling ceremony in Bremervoerde, the station where the trains will be refueled with hydrogen.

Alstom has said it plans to deliver another 14 of the zero-emissions trains to Lower Saxony state by 2021, while other German states have also expressed an interest.

Hydrogen trains are equipped with fuel cells that produce electricity through a combination of hydrogen and oxygen, a process that leaves steam and water as the only emissions. Excess energy is stored in ion lithium batteries on board the train.

The Coradia iLint trains can run for about 600 miles (1,000km) on a single tank of hydrogen, similar to the range of diesel trains.

Alstom is betting on the technology as a greener, quieter alternative to diesel on non-electrified railway lines – an attractive prospect to many German cities scrambling to combat air pollution.

“Sure, buying a hydrogen train is somewhat more expensive than a diesel train, but it is cheaper to run,” Stefan Schrank, the project's manager at Alstom, said.

Other countries are also looking into hydrogen trains, Alstom said, including Britain, the Netherlands, Denmark, Norway, Italy and Canada. In France, the government has already said it wants the first hydrogen train to be on the rails by 2022.

### **19. Meyer Werft Floats AIDAnova, the World's First LNG-Powered Cruise Ship**

German shipbuilder Meyer Werft has floated out the world's first LNG-powered cruise ship from its covered construction dock in Papenburg. The float-out of AIDAnova took place from the shipbuilder's 504-meter building dock II. The vessel was then berthed at the outfitting pier, where its mast and funnel cladding will be fitted.

AIDAnova is scheduled to make the trip down the river Ems to Bremerhaven in late September. There, the cruise ship will undergo final outfitting and interior fittings, while further testing will be performed on the ship's LNG-powered engines followed by sea trials.

AIDAnova is the first of three LNG-powered ships planned for Carnival Corp.'s AIDA brand. The ship is scheduled to join AIDA Cruises' fleet this Fall as the first-ever cruise ship in the world to be fully powered by LNG. The AIDAnova will have over 2,600 passenger cabins, a gross tonnage of over 180,000, a length of 337 meters and a width of 42 meters.

The second ship in the series will be christened in the spring of 2021, followed by the third in 2023.

As of earlier this year, Carnival had agreements in place with Meyer Werft and its Finish sister yard Meyer Turku to build nine LNG-powered cruise ships across four of Carnival's nine global cruise brands with delivery dates between 2018 and 2023

## **20. Health At Risk From Cruise Ship Emissions, Say Environmentalists**

Huge spikes in toxic air pollution on an idyllic Greek island have been blamed on the cruise ships entering its waters. Tests carried out in the popular tourist destination of Santorini found that concentrations of dangerous ultrafine particles were up to 100 times higher near the ships than in surrounding areas.

This pollution has been linked to heart attacks and strokes, and experts say it is particularly dangerous for elderly people with pre-existing health problems. The research was carried out by the Hellenic Ornithological Society (HOS) with air pollution experts from Germany's Nature and Biodiversity Union (Nabu).

Ships traversing the Mediterranean can use heavy fuel oil – dubbed the “dirtiest of all fuels” – without exhaust cleaning systems as they are subject to weaker standards than those governing road vehicles. This results in ultrafine particles, carcinogenic compounds and soot being emitted into the atmosphere, which can pose a threat to those both on the boats and near the ports when they dock.

“We found concentrations of over 340 particles per cubic centimeter,” said Dr Axel Friedrich, who carried out the tests. “In a very busy street, you will find 20 to 30. The load of air pollutants that the ships cause was enormous.”

Nabu is calling on the shipping industry to switch to safer, low sulfur fuels and install systems that remove harmful pollutants from exhausts. They also said Greece should support the designation of the Mediterranean as a sulfur emission control area. This status has already been given to the North and Baltic seas and has resulted in a sharp drop in sulfur pollutants.

The European Commission estimated that 50,000 people die prematurely every year in Europe due to air pollution from shipping.

Philippa Hobson, senior cardiac nurse at the British Heart Foundation, urged tourists travelling on cruise ships to be cautious, especially if they already suffer from heart and circulatory diseases. “Our research shows that even short-term exposure to air pollution – just one or two hours – can have a lasting, negative impact on the heart and circulation,” she said.

“If you are worried about your health and are travelling on a cruise ship, it is best to try and minimize your exposure to air pollution by avoiding the areas near or downwind of the engine funnels – try to seek out the sea breeze on the decks.”

Sonke Diesener transport policy officer at Nabu stated: “People living on the Greek islands as well as tourists visiting them are suffering from shipping emissions. “We have seen these high concentrations of air pollutants in many different ports cities in the Mediterranean region and all over the world. However, this is no excuse for ship operators to go on with their reckless pollution.”

Nabu has been measuring pollutant levels in port cities around Europe, and recently called for coastal communities to ban high-polluting ships until their owners “take responsibility”.

In response to a report on cruise ship pollution released by the German environmental watchdog in August, the Cruise Lines International Association said their rankings used a “non-scientific approach”. They also said that the cruise ship industry shared Nabu’s objective of “lowering emissions and protecting the environment”.

Konstantina Ntemiri, environmental policy officer at HOS, called for “immediate political action” to protect public health and the environment on Santorini. “Companies involved in the management and operation of cruise ships in general make a lot of money from cruise tourism, as it is considered to be the segment with the highest growth in the tourist industry,” she said.

Island officials have imposed a limit of 8,000 ship passengers per day due to the enormous social, economic and environmental pressures placed on Santorini by the hundreds of cruise ships visiting each year.

## **21. German Car Giants Face EU Emissions Investigation**

The European Commission has opened an in-depth investigation to assess whether German carmakers BMW, Daimler, Volkswagen, Audi and Porsche colluded to restrict diesel emissions treatment systems.

In a recent statement, the Commission said it was investigating whether the firms agreed to limit the development of systems to reduce harmful emissions. It said that if proven, this could mean that consumers had been denied the chance to buy less polluting cars. It added that the opening of a formal investigation did not prejudice its outcome.

In October 2017, the Commission raided the firms as part of initial inquiries into possible collusion between car manufacturers on the technological development of passenger cars.

The Commission said its current in-depth investigation was intended to assess whether the carmakers colluded, in breach of EU anti-trust rules, to avoid competing on technology intended to clean up petrol and diesel car emissions.

The EU executive said it was focusing on information indicating that the companies, including BMW, Daimler, Volkswagen and Volkswagen-owned Audi and Porsche, had met to discuss the development and deployment of emissions technology.

According to the Commission, two kinds of emission control systems are under scrutiny:

- Selective catalytic reduction systems, which reduce nitrogen oxide emissions from diesel engines
- “Otto” particulate filters, which reduce emissions from petrol-driven cars.

EU competition commissioner Margrethe Vestager said: “The Commission’s in-depth investigation in this case concerns specific cooperation that is suspected to have aimed at limiting the technical development of preventing to roll-out of technical devices.”

In a statement, Daimler said that it was cooperating fully with the authorities and had filed a leniency application. It also said that the proceeding related exclusively to Europe and that there had been no price-fixing allegations.

A BMW spokesman said that it had supported the Commission in its work from the start of the investigation and would continue to do so. It also said that it was important to make a clear distinction between possible violations of anti-trust law and a targeted manipulation of exhaust gas treatment, “as the latter allegation does not relate to the BMW Group”.

The car giant said it was also examining the allegations of possible infringements against anti-trust law very closely and stressed that it was “wholeheartedly committed to the principles of market economics and fair competition”.

Volkswagen issued a statement saying that the VW group and relevant group brands had been fully cooperating with the Commission and would continue to do so. The statement added: “Due to the fact that the investigations are ongoing, the Volkswagen Group is not in a position to comment on the proceedings and, in particular, on the details of the proceedings at the present time.”

The Commission said it had no indications that the carmakers coordinated with each other on the use of illegal emissions-cheating “defeat devices”.

Greg Archer, clean vehicles director at campaign group Transport & Environment, said, “The automotive industry was once a jewel in Europe’s industrial crown, but its global reputation is now deeply tarnished and cannot be trusted anymore. “It has become its own worst enemy and needs regulators to act with strength and decisiveness to clean it up and establish rules that put it on a path to zero emissions.”

## **NORTH AMERICA**

### **22. EPA and NHTSA Hold Hearings on GHG/Fuel Economy Rollback Proposal**

#### **California: “There Is Nothing Safe About This Proposal”**

California’s leading air pollution enforcers and the state’s attorney general vowed to fight the Trump Administration’s proposed weakening of vehicle emission rules during a public hearing in Fresno on September 24<sup>th</sup>.

The chief of the California Air Resources Board, Mary Nichols, said the Environmental Protection Agency’s (EPA) proposed rule, deemed the Safer Affordable Fuel Efficient rule, is nothing of the kind.

“There is nothing safe about this proposal,” said Mary Nichols. Nichols called on the U.S. Environmental Protection Agency to withdraw it. California has led the nation in embracing and supporting clean air technology, she said, and the state “will not sit idly by as you try to flat line our efforts.”

The Safer Affordable Fuel Efficient (SAFE) Vehicles Rule would freeze fuel economy and tailpipe emissions standards at 2020 levels for passenger cars and light trucks for model years 2021 to 2026. It also challenges California’s state authority to regulate its own emissions standards to reduce greenhouse gases. California’s standards are more stringent and include requirements for automakers to sell a certain number of electric cars.

“The proposal turns its back on decades of progress in cleaning up cars and trucks under the Clean Air Act; ignores currently available and cost-effective clean vehicle technology; wastes gasoline; and pumps more climate-changing gases into the atmosphere,” she said.

“Your proposal emerged from a back-room process from which California was excluded, despite repeated efforts to join a conversation,” Nichols said in a statement. “No doubt reflecting the hasty way it was developed, this proposal is riddled with numerous flaws.”

Nichols called the administration’s argument that California maintained no authority to regulate its own emissions “a flabby exercise in muscle flexing.”

The state has maintained it holds the authority under the Clean Air Act (CAA). California’s air pollution is among the worst in the nation and officials argue strict emissions controls are needed to thwart it.

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The U.S. EPA and the National Highway Traffic Safety Administration have said easing emissions standards would keep the cost of cars down, encouraging people to get rid of older, polluting vehicles for newer, cleaner models. Opponents of the Trump Administration’s proposal said rolling back emissions standards would increase harmful pollutants and threaten public health.

Outside the meeting, Nichols said she believes the Trump Administration believes its plan is going to save money for the auto industry. “And I think this is coming from the president,” she said. But automakers are “saying the current standards are OK,” she said. The industry only says they want a little more time and flexibility to comply, she said.

During her testimony, Nichols said Fresno was an appropriate location for the meeting on the proposed rollback of tailpipe emissions standards. “This is ground zero for the most stubbornly persistent violations of air standards,” she said. The San Joaquin Valley has among the worst smog and particulate pollution in California and the U.S.

California Attorney General Xavier Becerra testified that the state has stringent air standards for a good reason. “We don’t do this because it’s easy or it feels good,” he said. “We do this because 26 percent of school-aged children here in the San Joaquin Valley suffer from asthma. We do it because the five largest fires in California history occurred in the last five years.”

Climate change also is a factor in California’s opposition to the Trump Administration proposal. California cannot back away from its fight against climate change, Becerra said. “We must continue to tackle the No. 1 source of greenhouse gas emissions: our vehicles.”

Becerra doubled down that the state was "prepared to prove that EPA and [National Highway Traffic Safety Administration's] proposed rollback of our national Clean Car Standards violates federal law."

Becerra said his message to the EPA: "Do your job. Withdraw this proposal. Fulfill your duty under federal law to protect all Californians and Americans from harmful greenhouse gas emissions and to conserve energy."

California EPA Secretary Matthew Rodriguez spoke at the meeting against the federal EPA proposal. California has led the nation in cleaning the air and 12 other states and the District of Columbia have joined in adopting the regulations, he said. The proposed regulations are not supported by science or technology, Rodriguez said. "You can be assured California will object to it at every step."

Matt Rogers represented U.S. Sen. Kamala Harris. "Rolling back the federal fuel economy and greenhouse gas emission standards will jeopardize our efforts to reduce our reliance on fossil fuels," he said. "The Administration's decision is not based on scientific evidence whatsoever. It would result in job losses and cost Americans money at the pump."

Rogers said Harris has led 34 Senate colleagues in a resolution affirming one national program and defending state authority under the Clean Air Act to protect citizens from harmful air pollution. "Now is the time to accelerate innovation forward toward a cleaner future, not threaten our health and our environment by rolling back these standards," he said.

### **Representatives Of The Auto Industry Weigh In**

Automakers believe climate change is real and are acting to reduce carbon emissions in new vehicles, said Steven Douglas, senior director of energy and environment for The Alliance of Automobile Manufacturers, an association of 12 of the largest automakers and the leading advocacy group for the auto industry.

About 500 vehicle models achieve 30 miles per gallon or more on the highway, and 80 of the models get 40 mpg or more, Douglas said. There are 45 hybrid-electric vehicles and more are on the way to market. But Douglas said continued support for improvements in fuel economy must account for consumer acceptance. "No one wins if our customers are not buying the new highly efficient products offered in our showrooms. The standards must account for consumer willingness and ability to pay for newer technologies in order for all the benefits of new vehicles to be realized."

Douglas urged California and the federal government to work together to "find a common-sense solution that sets continued increases in vehicle efficiency standards while also meeting the needs of America's drivers. One National Program enables us to keep new vehicles affordable, so more Americans can replace older vehicles with models that are cleaner, safer and more energy-efficient," he said.

### **Health Effects Of Air Pollution Also Must Be Considered**

Dr. Alex Sherriffs, a Fowler doctor who is a member of the California Air Resources Board, said California and the federal government have to work together to fight greenhouse gases. This year has set records for wildfires in California, which led to the worst particulate pollutions for decades

in the San Joaquin Valley. “Science tells us that climate change clearly in our lengthening wildfire season and our current wildfire behavior,” he said.

Sherriffs said the San Joaquin Valley’s annual premature mortality deaths from air pollution are measured in the hundreds. “We cannot afford to move backwards away from achievable goals,” he said.

Clare Statham, a Fresno grandmother of three, said two of her grandchildren have asthma and in the past three years she has developed symptoms. Statham said she wants the federal government to think about how reducing fuel economy standards would affect their children and grandchildren. Stringent fuel-efficient standards for cars are not too expensive when compared to medical costs, such as those incurred from two of her granddaughter’s emergency room visits, she said. “Please learn those facts before you define what ‘too expensive’ means.”

Alicia Contreras, the national organizing deputy director for Mi Familia Vota, came from Phoenix to speak at the hearing. Contreras said rolling back emissions standards would particularly harm minority communities who live in urban areas and already experience high levels of air pollution. “We think about the environment and what these rollback changes are going to do and how it will affect our Latino families,” she said.

“This is an economic justice issue,” she said.

Lucy Clark came from Kern County. “After 40 years of living in the Valley, I have developed adult onset asthma,” she said. “I don’t want the waiver that California has to be removed by this program. We need our clean regulations for clean air not just for old folks, but for our children.”

### **Former EPA Staffer Blasts Rollback Plan**

A former EPA employee with a decade of technical experience on vehicle greenhouse gas standards is calling the analysis supporting the Trump administration’s proposed rollback of vehicle GHG and fuel economy standards “the most biased and dishonest technical analysis I have ever seen during my 40-year career,” predicting that the plan will fail in court if finalized. The statements come from Jeff Alson, an engineer who retired from EPA in April after 40 years at the agency’s National Vehicle and Fuel Emissions Laboratory, including a decade helping to craft the agency’s GHG standards for vehicles.

“This radical proposal . . . lacks any credible technical rationale, is being rejected in the court of public opinion, and will never stand up to judicial scrutiny,” Alson says in a press statement elaborating on testimony he gave at a September 25 hearing on the proposed rollback in Dearborn, MI. “It will unnecessarily worsen climate change and take money from consumers and give it to the oil companies, It must be withdrawn,” he adds.

Alson’s comments echo and expand upon critiques that he and other supporters of the Obama-era standards have been making of the Trump proposal, including internal criticism by EPA’s own staff.

Alson’s critiques may carry particular weight because he was at the agency until well into 2018, giving him first-hand experience with what sources describe as a freezing out of EPA technical experts in early development of the plan and the freedom to be outspoken about it.

Alson claims the proposal is based upon the “most secretive regulatory process and the most biased and dishonest technical analysis I have ever seen” in his work at the agency, contrasting it with “transparency and consensus” that led to development between 2009-2012 of the current rules. That process included “hundreds of meetings with automakers, suppliers, California and other states, labor, environmental and consumer groups.”

The bulk of Alson's statement reiterates and sharpens several criticisms made by supporters of the current rules, including that DOT and the White House shut EPA experts out of crafting the plan. He says that claimed fatality reductions under the proposed rollback depend on unprecedented and flawed assumptions of vehicle miles traveled (VMT), and the justification for the plan also overstates the costs of technology to comply with the current rules.

“After working together for seven years, DOT refused to have a single technical working meeting with EPA staff after the 2016 election and completely locked EPA out,” Alson says. “EPA experts could have helped DOT do a better analysis for the American people, but [were] not allowed to do so. I know this because I was there.”

Alson's claim aligns with prior coverage, including that the agency's technical staff requested that the name of EPA's office with expertise in transportation matters be omitted from the proposal's regulatory impact analysis.

Legal experts have charged that EPA's sharp critiques could jeopardize the plan in court if the final rule does not adequately address the agency's concerns about the measure's technical foundation.

Alson adds that the rule's supporting analysis suffers from a modeling “blunder” by DOT that assumes owners of older vehicles unaffected by the new standards would still drive them less under the proposed rollback, an assumption he dubs “the Fantastical Disappearing Miles.” Alson says this assumption is responsible for “about half” of the claimed reductions in fatalities under the Trump plan, an observation that closely tracks prior skepticism by critics of the plan's VMT provisions.

He also cites replication of DOT's modeling by the group Environmental Defense Fund, which he says found that virtually all of the plan's assumed reduced fatalities have “nothing to do” with the safety of vehicles regulated by the standards, but rather assumed reductions in driving of both new and old vehicles under the new standards.

Alson in his statement also slams the Trump administration's estimates that the current standards create \$200 billion in net societal costs as something that “does not pass the smell test,” given Obama administration projections of nearly \$100 billion in net societal benefits.

He also blasts other assumptions in the proposal, including “wildly exaggerated” estimates of the technology costs to meet the current rules that boost prior estimates by 50-80 percent, as well as flawed gas price assumptions.

“The only way that DOT can fabricate such a high cost is to assume that automakers will make a series of irrational and inefficient choices and waste money,” Alson says, adding that such cost assumptions as responsible for “over \$100 billion of fake benefits” attributed to the rollback.

With respect to gas prices and resulting costs to consumers, Alson says the rollback plan downplays consumer savings resulting from fuel economy and GHGs standards in several ways,

including assuming fuel costs of \$2.28 per gallon in today's prices and "not reaching \$3 for [10] years"; assuming a lifetime travel for individual vehicles lower than the Obama administration; and assuming that "nationwide travel" is 20-25 percent lower today than estimated in official federal data.

"The biases are endless," he claimed.

### **California Doesn't See Court Fight on Trump Emissions Challenge**

The head of the California Air Resources Board said September 11 she doesn't expect a protracted court fight from President Donald Trump's proposed challenge to the state's legal authority to regulate tailpipe emissions.

Trump officials have told the state they're just seeking public comment on the possibility of challenging the state's authority to write emissions standards that in some cases are tougher than the federal government's, Mary Nichols said in a San Francisco briefing with reporters.

Automakers have said privately and publicly that they don't want Trump to provoke an extended court fight with California and they won't urge the administration to take such a step, Nichols said.

These are arguments that mean a lot to lawyers, Nichols said. "We take them seriously but we are comforted by the fact that we don't think this is a fight that's actually going to happen."

The Environmental Protection Agency and the National Highway Traffic Safety Administration last month proposed revoking California's authority to regulate tailpipe emissions and to mandate electric car sales.

"They have reached out to us several times in a way that indicates a good faith desire on the part of the administration to make a deal with California and so we feel it's incumbent on us to have serious conversations about that and that's what we're embarking on now," Nichols said.

The White House and the state released a joint statement after an August 29 meeting that said they agreed to "future meetings to discuss technical, legal and policy issues with the shared goal of achieving one national set of standards for vehicle fuel economy and greenhouse gas emissions."

California "will not agree to anything" unless the administration drops its claim that federal fuel economy rules preempt the state's right to regulate tailpipe emissions, Nichols said. The state also has no intention of negotiating away its right to mandate electric car sales, she said.

### **OMB Completes Review Of 'Amendments' To Vehicle GHG Rules**

The White House Office of Management & Budget (OMB) has completed its interagency review of EPA's proposed "technical amendments" to its light-duty vehicle GHG rules, to correct two alleged errors in the program that complicate compliance for automakers.

OMB's review wrapped up September 6, according to its website.

The proposed changes are largely separate from a broader controversy over the Trump administration's proposal to largely freeze EPA and the Transportation Department's vehicle GHG

and fuel economy rules after model year 2020, though they could aid and clarify automakers' compliance with the program.

The first proposed change to the program is expected to give automakers more generous compliance credits for advanced vehicles and other technologies -- crediting the industry has argued was intended in the original regulation.

Automakers had raised the issue in one part of a broader 2016 petition to the agencies seeking a number of regulatory changes, including efforts to better harmonize the GHG and fuel economy rules. That petition appeared to indicate that fixing the issue could roughly double the number of "multiplier credits" manufacturers could earn between MY17-21 under the GHG program for plug-in hybrid EVs, compressed natural gas vehicles and fuel cell vehicles. The multipliers end in MY22 under the current program.

The second expected program change in the proposal would clarify crediting for off-cycle technologies after an alleged mistake in the rule raised implementation concerns for some manufacturers, according to OMB's website. Off-cycle credits refer to incentives for technologies that reduce GHGs but which are not necessarily accounted for under standard vehicle testing procedures.

### **EPA Critics Seek To Preserve Suit Over Vehicle GHG Rule Rollback Finding**

Several states, environmentalists and electric vehicle (EV) backers are urging an appellate court to reject EPA's bid to dismiss their suit over the agency's April determination that it must weaken federal greenhouse gas standards, saying the finding is a "final action" with direct legal consequences and is therefore subject to judicial review.

The litigation over the rollback determination, if successful, could create a major hurdle for the Trump administration's separate proposal to roll back vehicle GHG and fuel economy limits for model years 2021-2026, given that it could force EPA officials to re-do its analysis before proceeding with any rulemaking.

Opponents of the administration's rollback strategy say EPA's 11-page determination released in April saying that its standards are "not appropriate" under the Clean Air Act is unlawfully thin. Critics argue that the agency disregarded regulatory requirements to base its decision on an in-depth technical review the Obama administration released in 2016, as well as a detailed assessment of several factors related to the rules.

But before they can argue over the merits of the agency's April finding, the critics must first persuade the U.S. Court of Appeals for the District of Columbia Circuit that the determination is a "final agency action" subject to court review.

The Justice Department (DOJ), filing with the court on behalf of EPA, and two major automaker trade groups in a separate filing, in July argued the determination was merely a decision to start a new rulemaking, and that it did not change the underlying standards through MY25, which EPA issued in 2012.

That regulation outlined a "mid-term evaluation" process under which EPA, the Transportation Department and California would assess the latter portion of the standards and determine by April 2018 whether to retain, strengthen or weaken them. EPA's determination concluded that process.

A coalition of 17 Democratic-led states, environmentalists and an EV group known as the National Coalition for Advanced Transportation (NCAT) filed suit over the determination, and the cases were consolidated as State of California, et al. v. EPA.

The states argue in an August 29 response brief that the April finding satisfies the two-prong test in the 1997 Supreme Court case *Bennett v. Spear* that governs when an agency action is considered “final.” Those prongs are that the action marks the “consummation of the agency’s decision making process” and that it determines rights or obligations or has legal consequences.

The states argue the finding “readily meets the first Bennett condition” because it finds the current GHG standards “are not appropriate” and “should be revised.” Additionally, it “purports to conclude the Mid-Term Evaluation” outlined in the original 2012 rulemaking for MY17-25, and “provides EPA’s definitive position.”

Regarding the second aspect of *Bennett*, the states say the April determination “carries legal consequences for the agency” because the finding requires EPA to begin a new rulemaking. States also face immediate consequences, they argue, because they can no longer rely on the projected GHG cuts from the current standards.

This has caused some states to prepare rules that adopt California’s separate GHG limits and has caused Golden State regulators to propose a new rule “clarifying that its agreement to accept compliance with the federal standards will be available to manufacturers only if the current federal standards remain intact.”

A separate August 29 response brief from several major environmental groups argues that the situation is similar to a 2016 case, *U.S. Army Corps of Engineers v. Hawkes Co.*, in which the Supreme Court unanimously found that jurisdictional determinations (JD) under the Clean Water Act (CWA) are subject to court review.

The justices found that a determination that a water body is jurisdictional under the CWA -- which would waive a five-year “safe harbor” of federal enforcement of discharges -- was enough to trigger court review even though it did not directly enforce any limits.

As in *Hawkes*, which held that a JD opens the door to agencies imposing permits or enforcement action, the environmental groups argue in the vehicle rule context that EPA’s April determination requires it to begin a new rulemaking. “Those legal consequences are sufficient in this unique context to make an action final and challengeable,” they argue.

Both environmentalists and a separate brief from EV proponents also cite another holding in *Hawkes* that because a “negative” JD would give a property owner a five-year safe harbor from enforcement, “it follows” that a “positive” JD has legal consequences because it rejects such a safe harbor.

This is important in the vehicle context because EPA’s April determination withdrew a January 2017 determination that the Obama EPA issued finding its current GHG standards are “appropriate” and should be retained -- and all parties agree the Obama-era determination was reviewable.

“Accordingly, the reversal and withdrawal of that 2017 Final Determination is also a final agency action; it has the opposite legal consequence of the prior final determination and therefore meets

the second prong of the Bennett test,” says the EV supporters, which include NCAT and four electric utilities.

Highlighting the legal flaws of the determination itself, critics say EPA's finding diverged from key aspects of the mid-term evaluation process that were outlined in the 2012 regulation. That rule, for example, required EPA to base its decision on a “technical assessment report” (TAR), which the Obama administration and California officials released in 2016, finding the current rules could be achieved at reasonable costs.

“Despite EPA's regulatory mandate to base the determination upon the TAR . . . the Revised Determination largely ignored the TAR,” the states' brief argues, citing a California air regulator who concludes that the finding “is not based on the Draft TAR” because it does not use the report's findings and analysis “in any substantive or meaningful way.”

Additionally, the 2012 rule also outlined a series of factors that EPA must assess when making its determination, including feasibility of the standards, costs and other issues.

“Despite the requirement that EPA set forth in detail its assessment of specific factors, the agency instead stated it would defer several such assessments to a future rulemaking,” the states say.

Similarly, the environmental groups say the agency based its revised determination on “‘new information’ not made available to the public for comment, but allegedly contracting the existing TAR.” That runs afoul of the 2012 regulation's requirement that supporting technical analysis for the determination be open to public comment, they say.

The groups also charge that the determination might allow EPA to “improperly” evade a series of court precedents that require agencies to offer a reasoned explanation for reversing policy.

“Notably, EPA’s motion has not disavowed the possibility that the agency would seek in a future rulemaking to avoid its duty to explain the reasons for changing its position by claiming that the Revised Determination, including the withdrawal of the [2017] Final Determination, had effectively erased the latter and its technical support,” the environmentalists argue.

This offers “yet another significant legal consequence that supports its reviewability,” they say.

### **California Moves To Protect Auto Emissions Rules From Trump Rollback**

On September 28<sup>th</sup>, California regulators voted to require that automakers stick with Obama-era federal vehicle emissions standards for cars sold in the state regardless of Trump administration efforts to weaken the standards. The California Air Resources Board affirmed a provision in its greenhouse gas vehicle regulation that establishes that only cars meeting current federal standards for model years 2017 through 2025 comply with the state's standards and can be sold there.

California's position is nationally significant because the state is the largest U.S. auto market and boasts the nation's most aggressive policies to address climate change. Also, a dozen states and the District of Columbia have adopted California's emissions rules, accounting for more than a third of all U.S. vehicle sales.

California has long been allowed under a U.S. Environmental Protection Agency waiver to set its own, stricter vehicle emissions rules to fight heavy smog in Los Angeles and other urban areas.

The Trump administration has proposed revoking that authority, something that could cast doubt on the state's powers to sidestep federal standards.

In a statement, CARB Chair Mary Nichols said the state would "continue to work to keep a single national program," but that the vote ensures that California and 12 other states will not fall victim to the Trump administration's rollback of vehicle standards should its proposal be finalized.

Automakers have urged California and the administration to reach agreement, rather than face years of uncertainty. Automakers want looser emissions standards because consumers now favor bigger cars that use more fuel.

During the board's meeting in Sacramento, the 16-member panel also expanded a climate rule that reduces carbon pollution with tradeable credits that gasoline and diesel producers must purchase from producers of lower-carbon fuels, such as hydrogen and biodiesel. By further incentivizing those cleaner technologies, the low-carbon fuel standard is expected to cut the cost of a new electric vehicle by up to \$2,000 while raising gas prices by up to 36 cents over the next 12 years.

The market-based program, first adopted in 2009, aims to cut greenhouse gas emissions by spurring technology advancements that reduce the carbon intensity of transportation fuels. The state imposes a gradually declining cap on carbon intensity from "well to wheel," including oil extraction, fuel production and distribution. Companies that produce gasoline, diesel and other fuels must meet those carbon-reduction targets each year, either directly or by purchasing credits from clean-fuel producers that exceed those standards.

In extending its low-carbon fuel standard, the state will require a 20% cut in the carbon intensity of transportation fuels by 2030, compared with a 10% reduction by 2020 under the current mandate.

"These amendments will take California's climate fight up another notch," air board chair Mary Nichols said.

Taken together, the actions show some of the ways California can forge ahead fighting global warming in spite of the Trump administration's moves to dismantle climate regulations. Much bolder actions will be needed to slash greenhouse gases to meet state targets, including the latest ambitious goal Gov. Jerry Brown issued in an executive order earlier this month: making California's entire economy carbon neutral by 2045.

The transportation sector remains the biggest obstacle to California meeting its climate goals. Pollution from cars and trucks, already the state's largest source of greenhouse gas emissions, has been rising the last few years as a result of more driving and the popularity of bigger, less-fuel-efficient SUVs.

The federal proposal would result in 12 million of tons of excess greenhouse gas emissions by 2030 in California, both from vehicle tailpipes and from refineries as a result of increased gas consumption, according to an air board analysis. That additional pollution would wipe out any benefits from the strengthened low-carbon fuel standards, the board projected.

Automakers asked the Trump administration early on to relax emissions rules, but now say they don't want the market split into two, requiring them to build different models of cars. Auto industry

representatives urged the Air Resources Board to hold off on the measure and try to reach a compromise with the federal government.

California officials dismissed that idea, but said they've continued negotiations with the Trump administration. After a meeting last month, the White House, federal officials and the California Air Resources Board issued a joint statement agreeing to future meetings "with the shared goal of achieving one national set of standards for vehicle fuel economy and greenhouse gas emissions."

The low-carbon fuel standard reauthorized this week is one of the lesser-known pillars of California climate policy and is crucial for the state to meet its ambitious target of slashing greenhouse gas emissions 40% below 1990 levels by 2030. Some of the changes to the program were designed to stimulate sales of zero-emission vehicles and the installation of electric charging and hydrogen fueling stations. Electric vehicles account for about 6% of vehicles sold in California, and that must ramp up dramatically if California is to meet its climate goals.

One notable provision directs utilities to use low-carbon fuel credits to offer increased rebates at car dealerships at the time of purchase, rather than by reimbursement after the fact. Customers would be offered an upfront rebate of up to \$2,000 on the purchase of a zero-emission vehicle. The statewide program, being developed by utilities and automakers, could begin as soon as 2019.

"This is money on the hood that can go to driving down the purchase price," said Will Barrett, director of clean air advocacy for the American Lung Assn. in California. "It gives people a real tangible, on-the-spot incentive to make the clean-air choice."

The auto industry says more generous rebates are needed because several car manufacturers are close to running out of federal tax credits of up to \$7,500 per electric vehicle.

The fuel standard won't get California to its pollution-reduction targets on its own but is an important part of state officials' three-pronged approach to reducing transportation emissions by shifting to cleaner fuels, slashing tailpipe emissions and reducing driving through transit-oriented development.

As part of the expansion of the program, the air board also established new protocols for generating credits through carbon capture and sequestration projects that collect emissions before they spew into the atmosphere and injects them underground. Those adjustments reflect a growing recognition by experts and regulators that sequestration will be essential to keeping global temperatures from rising no more than 2 degrees Celsius and avoiding the most devastating consequences of climate change.

The expansion of the low-carbon fuels program was greeted enthusiastically by biofuel producers and other renewable energy interests who benefit from the credit-based program and say it will help continue the shift toward cleaner technology. The oil industry, the main target of the rules, has warned of increased costs that will be passed on to consumers in the form of higher gas prices.

Air Resources Board spokesman Dave Clegern said the low-carbon fuel standard is just one part of a portfolio of state greenhouse gas reduction policies that "has the potential to save individual California households money, as efficiency-related actions that reduce the amount of fuel used offset the somewhat higher costs of some low-carbon fuels today."

## **Trump Fuel-Economy Proposal Writes Off Rising Global Temperatures**

It's not that the Trump administration doesn't believe in climate change. It just doesn't want to do anything about it.

In a 500-page draft environmental impact statement concerning the EPA's and NHTSA's joint proposal to roll back fuel-economy and emissions regulations, the NHTSA reports that it expects global temperatures to rise by 7 degrees Fahrenheit (about 4 degrees Celsius) by 2100, the Washington Post reported on September 28th.

The administration doesn't plan to address it, according to the statement.

Climate scientists have identified a global temperature rise of 2 degrees Celsius from pre-industrial times as a limit to avoid catastrophic climate effects. Under the Paris Climate Accord, every country except the U.S. has agreed to that target as an upper limit. President Donald Trump withdrew the U.S. from the Paris agreement.

The draft acknowledges that human activities contribute to global warming, but essentially concludes that curbing U.S. vehicle emissions alone is not enough to solve it. The NHTSA estimates that the proposal to freeze fuel-economy standards through 2026 would increase global warming by 0.003 degrees Celsius.

In the summary on page 12, the statement says: "Human activities, particularly fossil-fuel combustion, have been identified by the Intergovernmental Panel on Climate Change as primarily responsible for increasing the concentrations of [greenhouse gases] in the atmosphere; this buildup of GHGs is changing Earth's energy balance."

One hundred and sixty pages later, the statement adds: "achieving [greenhouse-gas] reductions from the passenger car and light truck vehicle fleet to the ... degree that emissions reductions will be needed globally ... would require substantial increases in technology innovation and adoption compared to today's levels and would require the economy and the vehicle fleet to substantially move away from the use of fossil fuels, which is not currently technologically feasible or economically practicable."

Scientists have linked increases in global warming to higher frequency of powerful hurricanes, extreme global heat waves, and sea level rise that would inundate Manhattan and Miami or require costly coastal defenses.

As expensive as mitigating climate change would be, however, several scientific studies have shown that efforts to adapt to it will be even more costly.

### **23. Automakers Utilities Aim to Halve Transportation Energy Use by 2050**

Stronger fuel economy standards and federal tax incentives for electric vehicles are top recommendations for how the country will cut the energy usage in the transportation sector in half by 2050 from an auto and utility group. Audi AG, General Motors Co., and the Southern Co. are among 24 companies and environmental and policy groups that were part of the 50x50 Commission, which released a report on the energy cuts September 26.

The report suggests local, state, and federal policy proposals that could cut in half transportation sector energy use by electric vehicle adoption and infrastructure development. The transportation sector accounts for nearly a third of all energy consumption in the U.S. today, the largest energy consumer behind the electric power sector.

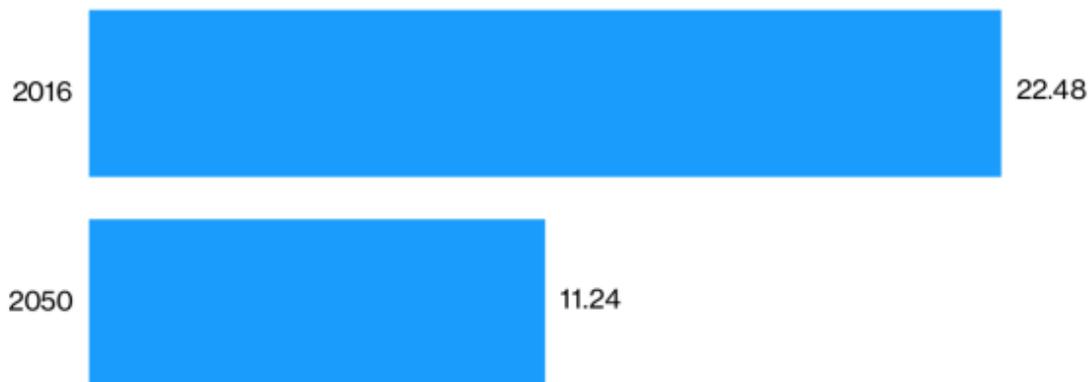
The Southern Co., a public utility holding company that generates and sells electricity, sees the electrification of the transportation sector being a “win-win” for the environment and consumers.

“We think electrification of the economy has both environmental benefits and economic benefits to customers,” Bruce Edelston, Southern Co.'s vice president of energy policy and a member of the 50x50 Commission, told reporters. “If we can increase sales without increasing the cost of capacity, then our customers will get lower rates, so it’s a benefit to them,” he said. “It’s also a benefit to the environment in terms of replacing emissions from gasoline and diesel vehicles with cleaner electricity.”

## Aiming to Cut Transportation Energy Use in Half

50x50 Commission seeks local, state, federal changes to reduce energy.

■ Quadrillion British Thermal Units of Energy



\*2016 is baseline from Energy Information Administration  
Source: Alliance to Save Energy

**Bloomberg Environment**

The goal is to reduce the total transportation energy sector consumption at a 2016 baseline number of 22.48 quadrillion British Thermal Units, to 11.24 quads by 2050, according to the Alliance to Save Energy, a coalition of industrial, technological, and energy corporations that promote energy efficiency and the group that formed the commission issuing the report.

The 2050 goal already faces an uphill battle, given the Trump administration’s proposal to freeze vehicle fuel economy requirements at the 2020 level. The report came out the same week that the Environmental Protection Agency and National Highway Traffic Safety Administration are holding three public hearings on the proposal to cap fuel economy requirements at a fleetwide average of 37 miles per gallon by 2020. Under the Obama administration’s plan, the fleetwide fuel economy would have risen gradually to 47 mpg by 2025.

Roland Hwang, the Natural Resource Defense Council's managing director of the climate and clean energy program, called the Trump proposal "a serious setback." He said he didn't believe the group could meet the 50 percent reduction by 2050 if rollback of the economy standards went into effect.

An important recommendation of the report is to ensure that electricity is listed as an energy source in the Alternative Fuel Tax Credit, which expired in December 2017. The policy provided a \$0.50 per gallon per gallon tax credit for alternative fuels, such as natural gas, liquefied hydrogen and propane, but doesn't include electricity as a fuel source. The report seeks to extend the tax credit and include electricity.

#### **24. California Advances Electric Vehicle Legislation**

A bill that requires a regular review of California's electric vehicle infrastructure is a step toward a clean-energy economy, a trade group said. By a unanimous vote, California lawmakers approved Assembly Bill 2127, as amended, that calls for a biannual update on electric vehicle charging infrastructure. The bill mandates the review to gauge progress on a state-wide effort to put at least 5 million zero-emissions vehicles on California roads by 2030.

California Assemblyman Phil Ting worked with national business group Advanced Energy Economy to craft the bill.

"This is an important step for California as it blazes the trail toward an electric transportation future," Amisha Rai, a senior California policy director for the AEE, said in an emailed statement.

The bill's passage comes as California takes on U.S. President Donald Trump over fuel economy standards. In early August, the state's attorney general said California would use every legal tool at its disposal to block Trump's efforts to weaken the standards.

The U.S. Environmental Protection Agency proposed a 37 mile per gallon average for cars and light-duty trucks by 2026. That's far less stringent than a mandate enacted under former President Barack Obama for 54.5 mpg by 2025. Under the new proposal, the EPA also confirmed plans to strip California of its authority to set its own fuel economy levels for vehicles, citing a 50-state solution in the proposal.

California's governor shamed the Trump administration for targeting efforts to control vehicle emissions he said were first introduced by then California Gov. Ronald Reagan. Using the power of the state office, Brown said he'd fight Trump's "stupidity" in every way possible.

California has one of the greener economies in the United States. It's on pace to get 33 percent of its power from renewable energy resources by 2020. The transportation sector is the largest emitter of greenhouse gases.

The U.S. Energy Information Administration reported battery-powered vehicle sales have accelerated the most for alternative vehicles but accounted for less than 1 percent of total vehicle sales last year. Plug-in hybrids, meanwhile, saw their market share increase from 0.1 percent to 0.5 percent between 2012-17, while sales in non-plug-in hybrids declined from 3 percent to 1.9 percent.

#### **25. California Pushes Ahead with Promotion of Zero-Emission Vehicles**

Despite the efforts by the Trump administration to roll back clean air regulations, California continues pressing forward with efforts to foster zero-emission vehicles. “By working across national and state boundaries, through this new focused effort, we can accelerate progress and help bring these important clean technologies to market years earlier. We are very supportive of this program and look forward to collaborating with our partners to achieve our clean air and climate goals,” said Richard W. Corey, executive officer of the California Air Resources Board.

California Governor Jerry Brown also announced that the State intends to get all of its electricity from clean sources such as solar and wind energy by the middle of the century.

CALSTART, a non-profit industry organization with more than 190-member companies – announced that governments and companies from around the globe have signed on to a new program that will accelerate the deployment of zero and near-zero emission commercial vehicles and technologies.

The transition to cleaner commercial segments would have significant benefits not only in terms of preventing the worst impacts of climate change, but also improving air quality and promoting public health in targeted countries, such as China, India and Mexico, where commercial vehicles represent a larger percentage of the total vehicle population and air pollution problem, supporters noted during a conference in California.

“By showing the demand for these vehicles, and focusing on the most viable markets, we can accelerate their adoption, improve air quality and reduce emissions,” said John Boesel, president and CEO of CALSTART, “Once we achieve commercial viability in these areas, we can work to reach economies of scale, bring costs down and increase adoption throughout the entire medium- and heavy-duty vehicle industry,” he said.

The goal is to achieve commercial success in the eight segments in the commercial truck segment by 2025 and have zero emission technology dominate new sales in these segments by 2040.

Guided by analytical work performed by CALSTART, CARB has adopted a targeted application approach, known as the “beachhead” strategy, to advance these technologies in California.

The pledge applies this strategy on a global scale, targeting transit buses, shuttle buses, package and delivery trucks, urban “box” trucks, yard tractors, port handling equipment and regional Class 7/8 cargo trucks in places such as New York City, one of the largest markets for commercial vehicles in the US outside California.

New York City joined the pledge to shift its Class 7/8 size trucks over to zero-emission vehicles. “NYC has the largest municipal fleet in the United States with over 31,000 vehicles and 60% already operate on some type of alternative fuel including hybrids, plug in electric, natural gas, biofuels and even solar,” states New York City Department of Citywide Administrative Services Deputy Commissioner and NYC Chief Fleet Officer Keith Kerman.

“NYC operates over 1,700 plug-in on-road vehicles now and is looking forward to expanding hybrid and electric operations in heavy- and medium-duty trucking. NYC stands ready to work with public and private fleet partners to advance and expedite this transformation and thanks CALSTART for convening this effort,” Kerman said.

Among the global beachhead markets targeted by the Pledge, transit buses are growing the fastest. There are more than 100,000 zero emission transit buses now in operation around the world.

Mitsubishi Fuso Trucks was the only major truck builder to sign the pledge. Makers of electric busses such as BYD, Proterra and New Flyer Industries also signed the pledge as did a number of notable suppliers including Siemens, Ballard Power Systems, Axle Tech, Unique Electrical Solutions and Zenith Motors.

## **26. CARB Program Will Monitor Air Quality In Communities Near Oil Fields**

Four communities near oil and gas production areas have been chosen to launch a program that will monitor air quality to determine if the nearby activity is having an impact, the California Air Resources Board announced. The communities—Lost Hills and McKittrick-Derby Acres in Kern County, and Baldwin Hills and South Los Angeles in Los Angeles County—are near historic oil regions.

It is well known that short and long-term exposure to air pollutants can contribute to negative health outcomes, including asthma, cardiovascular disease, and in some cases, cancer, the state agency said in its September 7 announcement. Limited information exists, however, on how oil and gas extraction facilities affect air quality in neighboring communities, it added.

“Many Californians live in communities near oil and gas facilities, but we know very little about the impact of these facilities on their neighbors’ health,” CARB Chair Mary D. Nichols said. “We need up-to-date information to assess whether existing standards and regulations are effective, and to lay the groundwork for any needed improvements.”

Fifty-six candidate communities were evaluated initially. The ones that were selected will host mobile air monitoring units for 3-4 months to identify and measure pollutants of concern. Community meetings also will be held to gather ideas, hear additional concerns, communicate results, and discuss solutions, the agency said.

“CARB recently adopted more stringent regulations requiring enhanced inspection of oil and gas operations including pump jacks. The rules require the use of technologies including chemical sniffers to better pinpoint and repair any leaks that are identified,” noted Richard W. Corey, the agency’s executive officer. “The SNAPS program will complement the regulation to better ensure oil and gas operations that impact nearby communities are identified and addressed.”

SNAPS also complements the Community Air Protection Program (CAPP)—established under AB 617, which Gov. Jerry Brown (D) signed into law on July 26, 2017. The measure required CARB to select communities heavily affected by air pollution for focused actions—by providing additional capacity to evaluate the effects of oil and gas facilities in particular.

## **27. California Ports Making Clean Up Progress**

### **Los Angeles Already Surpasses 2023 Pollution Reduction Targets**

According to the Port of Los Angeles’s 2017 Inventory of Air Emissions, the Port set new records for emission reductions, while its container volume reached an all-time high of 9.34 million twenty-foot equivalent units (TEUs). Overall, the 2017 findings show the Port has now met all of its 2023 Clean Air Action Plan (CAAP) goals.

Emissions of NO<sub>x</sub> at the Port are down 60% compared to 2005 emissions levels. Diesel particulate matter (DPM) is down 87%, and sulfur oxides (SO<sub>x</sub>) are down 98%.

Larger ships carrying more TEUs played a key role in preserving the Port's clean air gains. Container ship calls were down 22% while the average number of TEUs per vessel increased 60% since 2005. Fewer ship calls also led to fewer harbor craft trips. The largest ships tend to be new-builds with cleaner engines. Additionally, in compliance with California's progressively stricter shore power requirements, more ships plugged into shore-side electricity instead of burning fuel at berth. Ships that cannot plug in increasingly used alternative technology to capture emissions at berth.

Effective 2017, all ships calling at the Port met California and North American Emissions Control Area requirements to use fuel with 0.1% or lower sulfur content. More ships also are reducing fuel consumption by slowing down within 40 nautical miles of the Port.

Ongoing turnover of the truck fleet and upgrades of cargo handling equipment with the cleanest available engines also helped reduce emissions. More than half of nearly 17,000 drayage trucks calling at the Port in 2017 have 2010 model year or newer engines. Nearly 47% of cargo handling equipment—including cranes, tractors and forklifts—have Tier 4 or equivalent diesel engines.

### **Diesel Emissions Down At Port Of Oakland, But Health Risks Still High**

Diesel emissions have fallen 81 percent since 2005 at the Port of Oakland, port officials have announced. The new figure indicates that the port is closing in on its 2008 plan to reduce pollution impacts on nearby neighborhoods and diesel emissions by 85 percent by 2020.

"It's a high priority of the port to minimize the impact of global trade on the community," said Port of Oakland communications director Mike Zampa.

The exhaust from ships and trucks moving through the hub is a major contributor to pollution in the area, according to the Bay Area Air Quality Management District, which oversees regional air quality. Diesel particulate can trigger respiratory illnesses in the immediate area, affecting many West Oakland residents.

The Port of Oakland is an example of a port that's right across from a residential neighborhood, Zampa said. A 2008 study by the state's Air Resources Board found that West Oakland residents were exposed to almost three times the diesel particulates that other Bay Area residents experienced on average. A decade later, emissions are down, but health problems persist.

"While we're encouraged, the bottom line is that the health risk isn't coming down in West Oakland as quickly as it needs to," said Damian Breen, a deputy air pollution control officer at the air district.

Consolidating cargo onto fewer vessels has helped. And while officials say that more cargo is coming through the hub, truck traffic is also down by over half a million trips a year.

Requiring ships and trucks to use cleaner-burning, low-sulfur fuel has helped reduce diesel pollution. Over \$35 million in grant funding from the air district has gone toward helping truckers who come through the port replace old vehicles with cleaner trucks using the new fuel.

Money has also gone toward infrastructure that allows ships to plug into electric power and turn off their engines while offloading cargo. What needs to happen, Breen said, is better enforcement in asking ships to plug in, and better maintenance of equipment at the port.

A clean air plan proposed by the Port of Oakland at the end of June outlines plans for infrastructure that would help the port reach zero emissions in the decades to come. The only hindrance, according to Zampa, is a lack of funding and technology to make it happen.

## **28. Large Trucks Are Biggest Culprits Of Near-Road Air Pollution**

For the 30 per cent of Canadians who live within 500 meters of a major roadway, a new study reveals that the type of vehicles rolling past their homes can matter more than total traffic volume in determining the amount of air pollution they breathe.

A two-year University of Toronto Engineering study has revealed large trucks to be the greatest contributors to black carbon emissions close to major roadways. Professor Greg Evans hopes these results gets city planners and residents thinking more about the density of trucks, rather than the concentration of vehicle traffic, outside their homes, schools and daycares. The study was recently published in the journal *Environmental Science & Technology*.

"I've been asked by people, 'We live near a high-traffic area, should we be worried?' My response is that it's not so much about how much traffic there is, it's more about the percentage of trucks, older trucks in particular."

The comprehensive study -- led by Evans and collaborators at Environment and Climate Change Canada, and the Ontario Ministry of the Environment, Conservation and Parks, as well as the Metro Vancouver Regional District -- involved measuring vehicle emissions near roads in Vancouver and Toronto, including the 401, North America's busiest stretch of highway.

The difference between emission levels across the sites was more correlated with the number of large trucks on the road rather than number of cars.

Researchers found that air pollution levels right beside a major trucking route within a city were close to levels seen beside Highway 401, despite the road carrying less than one-tenth of the vehicle traffic. "This was in part due to differences in wind and proximity to the road but, surprisingly, the number of vehicles didn't make that much of a difference," said Evans.

The data also revealed a significant drop in emissions on the 401 on the weekends, when personal vehicle traffic is still very high, but the volume of large truck traffic is low.

Research consistently links traffic emissions to negative effects on both the environment and human health. "Whether it be cancer, respiratory problems, cardiac problems or neurodegenerative problems, there are numerous adverse health effects associated with the chemicals in these emissions," said Evans. "If we were able to reduce emission of pollutants like black carbon, we would also see an immediate climate benefit." Black carbon -- commonly called soot -- is a marker for exposure to diesel exhaust which is known to have negative health effects.

Evans points out that modern trucks have made large improvements in their emissions - it's the older diesel trucks that are the real culprits. "Those big, 18-wheeler diesel trucks last for a long time. We need to push to retrofit these old trucks with better emission treatment systems. Simply

retrofitting the worse offending trucks, or getting them off the road, is a tremendous opportunity to improve air quality in our cities."

The study will be part of a larger report in December that will stress the importance of implementing long-term monitoring of traffic related air pollution in Canada and indicating that targeting high-emitting vehicles such as old trucks can provide a path towards improving near-road air quality.

In the meantime, Evans hopes the study gets Canadians thinking about the effects of working, playing and living near truck-related air pollution. "When a cyclist is riding near a large truck and they see a large plume of soot coming out - it's important for them to be aware. Although shipping freight and construction by truck are critical to our economy, people need to know about the negative effects. There are ways that we can achieve a better balance."

### **29. Auto Emissions Device Maker to Spend \$6 Million in EPA Agreement**

Derive Systems, an engine-tuning technology producer, will spend more than \$6 million to comply with air regulations after the EPA found the company's devices helped drivers override their vehicles' emission controls.

The Environmental Protection Agency alleges the company sold about 363,000 products that were, at least in part, designed to override cars' and trucks' emissions control systems, violating the Clean Air Act. The agency announced a proposed settlement, including a \$300,000 civil penalty, September 24.

Manufacturers and companies such as Derive "should stand up and take notice of this settlement," Susan Bodine, assistant EPA administrator for enforcement, said in a statement.

The proposed consent must be approved by a federal judge before it takes effect.

### **30. Kavanaugh Touts Environment Rulings, Says He's Not Anti-Regulation**

U.S. Supreme Court nominee Brett Kavanaugh touted three times he ruled in favor of environmental protection as he defended his judicial objectivity. "In a large number of cases, I've ruled in favor of environmental causes because that's what the law required," Kavanaugh told the Senate Judiciary Committee during his September 5 nomination hearing, in response to questions from Sen. Orrin Hatch (R-Utah).

Hatch asked for Kavanaugh's views regarding the environment and the use of what's known as the Chevron doctrine. That doctrine gives agencies significant leeway in interpreting laws that are unclear. It is named for a landmark 1984 Supreme Court decision. Kavanaugh has written and spoken skeptically of the doctrine, but during his confirmation hearing, he talked about how he has navigated Chevron in support of environmental protection.

"I'm not a skeptic of regulation, I'm a skeptic of unauthorized regulation," Kavanaugh said within the first two hours of the hearing. He mentioned three cases in which he authored opinions in support of environmentalists or the Environmental Protection Agency:

- In 2010, Kavanaugh wrote the opinion in *American Trucking Associations v. EPA* upholding EPA approval of California's limits on emissions from nonroad engines.

- Kavanaugh wrote the opinion in the 2014 *Natural Resources Defense Council v. EPA* case, which vacated an EPA rule shielding cement kiln operators from environmental enforcement if they prove excess air pollution emissions due to malfunctions.
- Kavanaugh wrote an opinion in *National Mining Association v. McCarthy* upholding an EPA program aimed at regulating waterways near mountaintop-removal coal mining in 2014.

During the same line of questioning, Kavanaugh brought up what he saw as problems in giving agencies deference. “One of the things I’ve seen in the executive branch is a natural tendency—Congress passes laws but then doesn’t update the law,” he said.

“Maybe it’s an environmental law and then an executive agency wants to do some new policy, then proposes a new policy to Congress and Congress doesn’t pass the policy,” he continued. “The executive branch relies on the old law,” he said adding federal agencies would then justify fitting a new policy into an old law. “It’s a natural phenomenon because the executive wants to implement what it thinks is good policy,” he said.

It is the court’s job, Kavanaugh said, to figure out whether the agency has acted within the bounds of law as written. “Have you given them the authority?” Kavanaugh asked rhetorically.

## **ASIA-PACIFIC**

### **31. China Forges Ahead In Building Green Future**

China's unwavering commitment to promoting clean energy was widely appreciated at the Summer Davos 2018, as participants forecast China's continuous efforts to further structural energy reform. "China does not claim to be a leader, but it is, in fact, a leading force in green energy," said Lin Boqiang, head of the China Institute for Studies in Energy Policy at Xiamen University.

Lin said on a panel at the annual meeting that China's carbon emission might peak by 2022, eight years sooner than China's pledge in the Paris Agreement. China also promised to cut carbon emissions per unit of GDP by 60-65 percent by 2030 from 2005 levels.

In the past five years, China cut coal production capacity by 800 million tons, according to a report by China's top legislature published in July. Coal consumption, a major contributor to the country's air pollution, has fallen by 8.1 percent in the same period.

China has seen a remarkable improvement in air quality as a result. The average density of PM10 in 338 Chinese cities at prefecture level and above in 2017 decreased by 22.7 percent compared to 2013 levels.

China's investment in clean energy stood at 132.6 billion U.S. dollars in 2017, accounting for nearly 40 percent of the global total. By 2020, the country plans to invest 2.5 trillion yuan (about 370 billion U.S. dollars) in renewable energy, according to the National Energy Administration.

"The country has been through a period of fast, high-polluting growth. But that's over," said Isabel Hilton, editor of *Chinadialogue*. "China is now making a transition to a higher value, lower carbon economy."

Statistics show that China's installed solar power capacity was nearly 30 million kilowatts by 2017 and is expected to exceed 160 million kilowatts by 2020, accounting for almost 10 percent of the country's total installed electricity capacity. China also ranked the third regarding the total installed capacity of offshore wind turbines, accounting for 11 percent of the world's total as of the end of 2016, after Britain and Germany.

Due to continuous economic growth and strong policy support for air pollution control, gas consumption in China is likely to contribute 37 percent to the global gas consumption rise between 2017 and 2023, surpassing any other country in the world.

China's energy structure will be less carbon intensive in the future, with low-carbon energy's proportion in primary energy mix rising to around 25 percent by 2020, over 35 percent by 2030, and 50 to 60 percent by 2050.

Apart from efforts on the supply side, China is also navigating its energy consumption market to a greener orbit. In 2017, investment in China's new energy vehicle (NEV) industry surpassed 100 billion U.S. dollars, accounting for over 50 percent of the newly increased investment in the country's vehicle industry. "The NEV development in China provides an opportunity to upgrade our industry and to tackle air pollution," said Wan Gang, head of the China Association for Science and Technology.

For three consecutive years, China has remained the world's largest NEV market, with some 777,000 cars sold in 2017. By July this year, China has built 275,000 electric vehicle chargers, up 52 percent year on year. Exclusive license plates for NEVs have been used across the country.

"China is on the right path to realize the goal it set out in the first place," Wan said.

### **32. China Diesel Demand Gathering Momentum**

China's diesel fuel demand will grow at its fastest in at least five years as a pick-up in diesel-intensive sectors in the world's second-biggest economy coincides with lower output from domestic refineries, several sources and analysts said. Estimates of the hike in diesel use from three analysts and two oil industry sources range from 0.3 to 1.7% for 2018 compared with last year's stagnant growth, pointing towards a recovery for the industrial and transport fuel.

Diesel accounts for about 30% of China's appetite for petroleum products and is typically used to fuel trucks, as well as mining and construction equipment.

The slight pick-up in Chinese demand helped to boost Asian diesel margins to their highest in more than three years earlier this month.

"Our outlook for Chinese diesel demand remains positive, with consumption set to remain supported over the coming years with positive... trends in key diesel-intensive sectors, such as construction, manufacturing, freight and mining," said Richard Taylor, oil and gas analyst at Fitch Solutions.

This year's diesel growth will be the fastest since 2011, said Energy Aspects analyst Nevyn Nah. The demand increase is likely temporary, however, said the research unit of China National Petroleum Corp (CNPC), with economic growth moderating and tighter environmental scrutiny from Beijing.

“China’s diesel demand will stay around peak levels until 2020. After that, consumption will slowly go down,” said Wang Lining, researcher from CNPC Research Institute of Economic and Technology. “We noticed the recent pickup in infrastructure investment which led to a temporary boom in diesel consumption,” Wang said.

Besides increased demand from industry and mining, the lifting of an annual fishing ban of up to four months in certain areas this year has created pent-up demand for diesel, the industry sources said, speaking on condition of anonymity as they were not authorized to speak to media.

Higher industrial output ahead of the Golden Week holiday in early October also boosted demand, the sources said. Industrial output in China rose 6.1 % in August from a year earlier, the National Bureau of Statistics (NBS) said recently, a tick higher than in July.

Medium and heavy truck sales were up 3.5% in the first eight months from a year ago as vehicle producers sold 2.6mn trucks in the period, data from China Association of Automobile Manufacturing showed.

### **33. China Accelerates EV Strategy With Investments In Clean Energy Firms**

Randy MacEwen has made 39 separate trips to China in less than four years — an indication of how much opportunity the British Columbia-based executive sees in that country. Recently, MacEwen, who is chief executive of Burnaby-based hydrogen fuel cell maker Ballard Power Systems Inc. announced a \$208 million deal that links the company’s future to China’s fast-growing clean vehicle market.

Under the deal, Weichai Power Co., one of China’s largest diesel engine manufacturers, agreed to purchase \$163 million worth of Ballard’s stock at a 15 per cent premium; and to invest an additional \$45 million to form a joint venture that will manufacture Ballard’s fuel cells at a plant in China, where they could end up in buses, commercial trucks and forklifts.

Separately, Vancouver-based Westport Fuel Systems also announced a deal with Weichai, which agreed to purchase its components and license its technology to build 18,000 natural gas engines by 2023. Taken together, the deals show how China is investing in a future that envisions a shift from internal combustion energy vehicles to lower-emission, clean energy vehicles. The vast scale of those investments is enticing Canadian companies to strike partnerships and form joint ventures that send their technology across the Pacific Ocean.

“We’re in the very early moments of a major global transformation of the transportation industry,” MacEwen told shareholders on a recent conference call. “This transformation involves the move towards zero-emission vehicles.”

Many Canadian mining companies, particularly those developing lithium and cobalt deposits, have been working with investors in China, Japan and South Korea, looking to source the metals for use in batteries for electric vehicles.

By contrast, Ballard is designing and building fuel cells that can convert hydrogen to electricity, also for use in transportation. Such technology is better-suited for hauling heavy loads over a long range, an area where lithium-ion powered electric vehicles struggle, according to MacEwen.

MacEwen estimated China puts 400,000 new buses on its road every year, compared to around 5,000 in North America. That difference is attributable in part to the fact that China has growing urban areas with mass transportation needs, he said.

That Weichai, which is primarily a diesel engine company, is investing in hydrogen fuel cell technology, signals China's commitment to improving air quality and fighting climate change, according to MacEwen. "Two years ago, we wouldn't have been able to engage a company like this," he said.

Weichai has framed its deal with Westport as a way to improve air quality in China. Its chairman Tan Xuguang said Westport's technology can cut greenhouse gas emissions by as much as 20 per cent, according to Westport's press release.

MacEwen said the 2015 United Nations Climate Change Conference in Paris, in which countries from around the world agreed to limit carbon emissions to mitigate climate change, has also opened up new business opportunities. Now, major cities around the globe have signaled their intention to phase out internal combustion engines in their public transportation fleets. That's compelling diesel companies like Weichai to begin investing in alternatives, he said, such as his company's hydrogen fuel cell technology.

"China will be the largest hydrogen fuel cell market starting this year going forward," said MacEwen.

#### **34. India Wants EVs To Be 15 Per Cent Of All Vehicle Sales In Five Years**

India expects electric vehicles (EVs) to make up 15 per cent of all vehicles sales in five years, its transport minister said recently, as the country tries to curb greenhouse gas emissions and dependency on fossil fuels. Transport Minister Nitin Gadkari said India was working on measures to achieve its electric-mobility target, adding that the proposal may not include incentives to stakeholders.

India's policy thinktank, headed by Prime Minister Narendra Modi, had announced in 2015 a 15-year roadmap to electrify all new vehicles by 2030, which many experts had called ambitious. The proposal included a plan to limit the registrations of petrol and diesel cars and incentivize sale of electric vehicles (EVs). Gadkari said he does not see a need to subsidize electric vehicles (EVs) sold for personal use, but commercial EVs could be incentivized.

India is one of the world's fastest-growing car markets, but sale of EVs are negligible compared with millions of petrol and diesel cars sold every year.

EVs are expensive due to the high cost of batteries which are still not manufactured in India, and carmakers say a lack of charging stations could make the whole proposition unviable.

All EVs and alternate fuel cars would be exempted from taking permits, Gadkari said, a departure from the current practice which requires the owner to pay a substantial amount to secure permission to drive it.

To enable local manufacturing, the ministry is also planning to exempt import duties on a limited number of vehicles if they are brought in for testing, he said.

### **35. PM Modi Unveils Mobility Road Map, Seeks Investments In E-Vehicles Manufacturing**

Prime Minister Narendra Modi has declared that the government will soon come out with a policy on electric vehicles and alternative fuel technology to give a thrust to e-mobility in India.

“The world is now in the middle of a new mobility revolution” and India has “inherent advantages” to leverage this opportunity, the PM said. Exhorting industrialists and global business leaders to create a “new mobility ecosystem” that is in “sync with nature”, Modi said India can be the best place for the rapidly evolving technology.

The PM was speaking at the first Global Mobility Summit (MOVE) organized by Niti Aayog<sup>2</sup>, addressing an audience that included global business leaders such as Suzuki Motor chairman Osamu Suzuki, Toyota Motor chairman Takeshi Uchiyamada, ABB chief executive Ulrich Spiesshofer and Bosch’s Volkmar Denner. Mahindra & Mahindra chairman Anand Mahindra, Hero MotoCorp chairman Pawan Munjal and Bharat Forge chairman Baba Kalyani were among the top Indian automobile industry honchos who attended the event.

The new policy will seek to support automakers to raise production of battery-powered and alternate-fuel vehicles, as part of efforts to trim down the rising oil import bill.

The Prime Minister called the industry to invest in the manufacturing of electric vehicles and the required charging infrastructure. “Charge mobility is the way forward, we want to drive investment into batteries to smart cities to electric mobility,” he said.

The Prime Minister’s comments come in the backdrop of demand from almost all domestic and international automakers for a policy roadmap on electric vehicles so that investments can be planned. Industry players including Suzuki and SAIC Motors president Chen Zhixin appealed to the government to come out with incentive policies and accelerate construction of infrastructure, such as charging facilities.

Modi urged people to use public transport rather than private cars to help achieve the goal of congestion-free mobility. Unveiling several research papers which will provide a roadmap on future of mobility in India, the Prime Minister emphasized on increasing the use of public transport and focusing beyond cars to fight climate-related menace.

“My vision for the future of mobility in India is based on 7 Cs: common, connected, convenient, congestion-free, charged, clean, cutting-edge,” he said. Stating that common public transport must be the cornerstone of mobility, Modi said congestion-free mobility is critical to check economic and environmental costs.

Businessmen were impressed, though a section of the industry expected the government to announce an incentive program for electric and alternate fuel vehicles. There is the will and it is visible. This is probably one of the most seminal speeches by a global leader shared on the entire mobility ecosystem. Conviction was incredibly strong,” Mahindra said. “The Prime Minister has

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<sup>2</sup> The NITI Aayog (Hindi for Policy Commission), also National Institution for Transforming India, is a policy think tank of the Government of India, established with the aim to achieve Sustainable Development Goals and to enhance cooperative federalism by fostering the involvement of State Governments of India in the economic policy-making process using a bottom-up approach.

promised, we are going to come out with the stable policy for mobility and especially electric mobility and I am looking forward to it.”

Kalyani seconded Mahindra’s view. “He (Modi) said that we are going to come out with a very clear-cut policy; that is what industry needs. You need to know what you are making, as it has to be tested, homologated, etc. Once the policy comes, we are all set,” Kalyani said.

The two-day summit deliberated on topics such as electrification, reinventing public transport, alternative fuels, role of data analytics in goods transport and logistics.

### **36. 10,000 New CNG Stations Planned for India By 2030**

While electric vehicles grabbed the limelight at the 58th Annual SIAM Convention, there was another important announcement made by Dharmendra Pradhan, Minister of Petroleum and Natural Gas. Pradhan announced that the Indian government is planning to set-up 10,000 CNG stations across the country by 2030.

This news will delight commercial-vehicle users across the country – especially Ola and Uber drivers, as most of the cars in their fleet run on CNG. The announcement is an important one, as there are only 1,424 CNG stations in India at the moment, serving over 3 million CNG vehicles.

Given the present acute shortage, serpentine queues (occasionally snaking kilometers long) outside CNG stations are a common sight. To make matters worse, with prices of fossil fuels rising significantly over the past few months, an ever-growing number of commercial vehicle owners are switching to CNG vehicles.

Apart from being lighter on the wallet, CNG vehicles also emit 20-30 percent less carbon dioxide in comparison to petrol- or diesel-powered cars. Another major benefit of CNG is the fact that unlike crude oil, we don’t have to import it, thereby helping India’s economy.

As of now, only Maruti and Hyundai have CNG vehicles as part of their portfolio. Pradhan also requested other vehicle manufacturers to offer CNG models for sale in India – and it’s likely that Ford will also soon be launching CNG vehicles in the country.

### **37. Australia's Transport Emissions Reportedly Up by 63 %**

Australia has failed to mitigate transport-related greenhouse gas emissions for almost three decades, a report has found. The report, released recently by the Climate Council, revealed that transport-related emissions have risen 62.9 percent since 1990 and 3.4 percent in the 12 months between December 2016 and December 2017.

According to the report, emissions from transport have risen at a higher rate than from any other source since 1990. Transport was the nation's second largest source of greenhouse gas emissions, accounting for 18 percent of the total, after electricity (33 percent).

"Australia's transport emissions or transport greenhouse gas pollution levels have been steadily rising and are projected to continue going up," the report said.

"Factors such as population growth have led to a higher number of cars on the road, while increased demand for freight is also driving up truck emissions.

"Domestic air travel continues to increase, leading to an increase in aviation emissions."

The council found that "the absence of credible and comprehensive climate and energy policy" was largely at fault for the rise.

The report found that 87 percent of Australians travelled to work, school or university by car and that congestion was costing the Australian economy 16 billion Australian dollars (11.4 billion U.S. dollars) every year.

"To tackle climate change, Australia needs to rapidly roll out a fleet of sustainable transport solutions like high quality public transport, cycling and walking infrastructure as well as renewable powered vehicles in the form of electric bicycles, cars, trains, trams and buses," it said.

Authors Petra Stock, Will Steffen, Greg Bourne and Louis Brailsford have condemned Australia for being "one of just a handful of Organization for Economic Co-operation and Development (OECD) countries without greenhouse gas emissions standards for vehicles." "Mandatory vehicle emissions standards need to be introduced soon," they wrote.

### 38. New Zealand Government Promises 'Decent' Incentives For Electric Cars

The Government will soon offer incentives to New Zealanders looking to purchase electric vehicles, to move people away from traditional cars that burn fossil fuels. "What we're trying to do is get a package that incentivizes your middle class people to be able to do that, but also ensures that low income families aren't left behind," Climate Change Minister James Shaw said in a radio interview.

New Zealand now has around 10,000 electric vehicles, compared to just 250 five years ago, so there is an "exponential growth rate," Mr Shaw said. But that's only a quarter of one percent (0.25 percent) of the total vehicles on the roads.

Prime Minister Jacinda Ardern will be the keynote speaker at United Nations Climate Week in New York where she will promote New Zealand's initiatives around curbing climate change. Mr Shaw said she will discuss how "countries dragging the chain need to get their act together."

But New Zealand is far from exemplary in the area. The country's CO<sub>2</sub> emissions are increasing, according to the Ministry of Environment, and predictions point to New Zealand not being able to meet its 2030 and 2050 targets. "New Zealand's emissions have been going up rather than down, and like every other country in the world, we've got to bend the curve, and the next ten years is going to be critical," said Mr Shaw.

He said the Government has been "putting together a package of incentives," but did not go into any financial detail, saying the Government hasn't "made those decisions yet".

The main issue the Government faces, he said, is that New Zealanders are used to buying cheap second-hand vehicles from Japan, so the Government has to make sure the incentives are good enough to attract low-income households.

New Zealand is one of only a handful of developed countries without vehicle emission standards, and the Productivity Commission has pointed to the risk of New Zealand becoming a dumping ground for heavy, polluting vehicles that other countries won't buy.

Ms. Shaw told reporters earlier that one idea the Government is looking at is introducing a 'feebate' scheme, in which high emission vehicles would incur a fee, while lower emission vehicles would receive a rebate. In the US, electric vehicle owners get up to \$11,000, and it's around the same for those in the UK. In Spain, owners get up to \$13,000, while Hungarian electric vehicle owners are eligible for 21 percent of the vehicle's purchase price.

## **AFRICA**

### **39. Nigeria: Air Pollution - Nigeria Ranks 4th Deadliest Globally**

Nigeria has the highest maternal mortality in the world. It's the country with highest number of extremely poor people in the world and now, it has the highest burden of fatalities from air pollution in Africa and 4th globally.

Literally, air pollution is choking the life out of Nigerians. Indoors and outdoors, air pollution is killing more urban residents today than ever before.

The air people breathe in Nigeria is more likely to cause harm than the air in any other country in Africa because Nigeria currently has the highest burden of fatalities from air pollution in Africa and 4th highest in the world with 150 deaths per 100,000 people attributable to pollution.

According to the recently released annual State of the Global Air Report published by the Health Effects Institute (HEI), air quality in Nigeria and at least 10 other countries is among the deadliest anywhere on earth with higher than ambient air pollution death rates as a result of the environmental hazards combined with extreme pollution sources like generator fumes, vehicle emissions and crop burning among others.

The HEI notes that there were 150 deaths per age-standardized deaths per 100,000 people attributable to air pollution in Nigeria in 2016 (the latest year of available data), compared to high industrialized countries like China, 117 deaths per 100,000 people; Russia, 62 deaths per 100,000 people; Germany, 22 deaths per 100,000 people; United Kingdom, 21 deaths per 100,000 people; the United States, 21 deaths per 100,000 people; Japan 13 deaths per 100,000 people and Canada, 12 deaths per 100,000 people.

Only Afghanistan with 406; Pakistan, 207, and India, 195 deaths per 100,000 people per country, exceed the Nigerian figure.

The chart showcases a striking gap between the most and least polluted air around the world. While developed countries have experienced success in reducing emissions and air pollution levels, poorer nations have fallen behind, although it should be noted that tougher pollution controls are being introduced in some of the countries. In 1990, 3.5 billion people were exposed to it and that has now fallen to 2.4 billion despite an increase in the global population.

The report notes that 95 percent of the world's population is breathing unhealthy air. It said long-term exposure to air pollution contributed to just over 6 million deaths in 2016 with strokes, lung disease, lung cancer and heart attacks linked to many of them. After smoking, high blood pressure and poor diet, air pollution is the fourth-highest cause of death worldwide with most deaths occurring in developing countries.

In a number of the big Nigerian cities, when people present at the hospital with health problems including chest pain, dry throat, nausea, aggravated respiratory disease such as emphysema,

bronchitis, lung damage, and asthma among other respiratory problems, it often turns out that they've been exposed to the effects of poor air quality.

According to a 2016 World Health Organization report, Onitsha, Kaduna, Aba and Umuahia were among four of the 20 African cities with the worst air quality in the world. The WHO measured air quality by examining the annual mean concentration of particulate matter in nearly 3,000 cities across the world with populations of at least 100,000. Onitsha's average annual PM10 was 594 - nearly 30 times greater than the WHO-recommended annual level of 20. Kaduna, Aba, and Umuahia cities were ranked among the top 20 worst cities measured by PM10, ranking 8th, 9th, and 19th, respectively.

Air pollution is now the fourth-highest cause of death worldwide, trailing smoking, high blood pressure and diet, with the majority of deaths recorded in poorer nations with India and China leading the world in the total number of deaths attributable to air pollution in 2016 with 1.61 million and 1.58 million respectively. Data from the report show that ambient levels of unsafe air continue to exceed the Air Quality Guideline established by the World Health Organization, WHO.

All over town, worn out generators and vehicles with poorly-tuned engines are belching out smoke of noxious emissions, making the air as toxic on the streets as it is unhealthy in the kitchen at home where a kerosene stove burns sooty flames almost around the clock. A combination of incomplete combustion and lack of ventilation leads to high concentrations of particulate matter and other pollutants in the home and the resulting burden of household air pollution on human health. Rather than dispose refuse and some other wastes or unwanted materials some Nigerians burn them within their neighborhood.

The problem is also manifesting in the rural areas due to burning of firewood and coal for cooking. Globally the estimated population relying on solid fuels has reduced but Nigeria remains among countries with populations exposed to household air pollution from dependence on solid fuel. Worse still, over 70 percent of the fuel in the country is generated from fossil fuel. Most Nigerians are thus exposed to household air pollution with fine particulate matter levels exceeding air quality guidelines by as much as 20 times. Air pollution from indoor sources is recognized as the single largest contributor to the negative health effects of air pollution in Nigeria.

While developed nations have been acting to clean their air, Nigeria is still among the countries that have fallen behind as revealed in the death rate.

Nigeria produces more than 3 million tons of waste annually, and uncontrolled waste burning is one of the practices that contribute to deteriorating air quality. Almost every Nigerian is exposed to air pollution levels exceeding WHO guidelines and inflicting significant air pollution damage costs.

Part of the problem is that environmental regulations and enforcement are lax; people are more exposed to air pollution but less able to protect themselves from exposure either in the open, in the workplace or at home.

#### **40. Interim Secretariat Of The China-Africa Environmental Cooperation Center Unveiled**

The Provisional Secretariat of the China-Africa Environmental Cooperation Center has been unveiled at the United Nations headquarters in Nairobi in Kenya. Sun Baohong, the Chinese ambassador to Kenya and a representative of the United Nations Environment Program, said at the opening ceremony that the center will provide a platform for cooperation between the private

sector, research institutions and intergovernmental organizations in China and Africa on environmental technology and industry. This is an important measure to comprehensively deepen China-Africa environmental partnership and help deepen and enrich the content of China-Africa cooperation.

In his speech, Deputy Executive Director of the United Nations Environment Program, Joyce Msuya, praised the Chinese government's efforts in promoting sustainable development. She said that the China-Africa Environmental Cooperation Center provides a platform for African countries and China to cooperate under the framework of South-South cooperation and promote mutual cooperation to address global environmental challenges.

Eileria's ambassador to Kenya and head of the African Mission in Kenya, Bénet Russom, said that African countries have always attached great importance to environmental protection and sustainable development, while China has rich experience in ecological civilization construction and looks forward to the environment in Central Africa. The cooperation center can help African countries and China to upgrade their cooperation in the field of environmental protection.

Liu Ning, China's deputy representative to the United Nations Environment Program, read a congratulatory letter from Li Ganjie, Minister of the Ministry of Ecology and Environment of China. It is hoped that all partner countries and partner institutions will use the establishment of the interim secretariat of the China-Africa Environmental Cooperation Center as a starting point to comprehensively promote the construction of the China-Africa Environmental Cooperation Center and the environmental cooperation between China and Africa.

In order to promote the transfer of green technology between China and Africa, share China's green development experience, and provide a bridge for China-Africa exchanges, as early as December 2015, the Johannesburg Summit of the China-Africa Cooperation Forum proposed the establishment of a China-Africa Environmental Cooperation Center. Since then, with the joint efforts of the United Nations Environment Program, China and African countries, the parties decided to jointly launch the center.

## **GENERAL**

### **41. Global Car Sales Hit Speed Bump as Demand Slows and Trade Tensions Loom**

After nearly a decade of growth, new-vehicle sales in the world's largest auto markets are entering their first sustained slowdown since the global financial crisis, putting pressure on profits as uncertainty around the U.S.'s trade policies looms.

China's once-booming car market is cooling, in part because of escalating trade tensions with the U.S. American demand for cars and trucks—long a bright spot for the global auto industry—has topped out, following a seven-year growth streak that helped lift earnings for many car makers and auto-parts suppliers world-wide.

In Europe, where new-vehicle sales have benefited from the continent's recovery, the car market is also softening as demand returns to prerecession levels. That is making profits harder to come by in a region where many car companies have long struggled to make money.

To be sure, global demand remains robust, driven by continued economic strength, but headwinds are gathering.

President Trump's trade policies are undermining consumer confidence in many markets outside the U.S. and are widely seen as the biggest threat to continued economic growth.

An easing of tensions between the U.S. and its major trading partners could still prevent the slowdown in auto sales growth from becoming a more rapid decline, say analysts. Evidence of that came recently, when an agreement between the U.S. and Mexico to rewrite portions of the North American Free Trade Agreement buoyed investors, lifting U.S. stocks, global currencies and commodities. Shares of General Motors Co. and Ford Motor Co. surged. Following this, German auto stocks including Volkswagen AG, BMW AG and Daimler AG—which have big factories in the U.S. and Mexico—outperformed the country's broader DAX index.

But the U.S. is still threatening Europe with new tariffs and ratcheting up tariffs on China, the biggest auto market by sales, which has responded with a 40% import tax on U.S.-built vehicles. An all-out trade war could push the auto industry off a cliff, say analysts. Oxford Economics, a global forecasting group, estimates that a "moderate trade war scenario" could result in a decline in global gross domestic product in real terms by about 0.5% in 2019, which could sap demand for new vehicles.

This worry has put several car makers, including Ford and Fiat Chrysler Automobiles NV, into caution mode as they temper their financial expectations. Daimler in June issued an unexpected profit warning, saying China's retaliatory import duties on vehicles built in the U.S. would dent sales and profits for the sport-utility vehicles it makes at an Alabama plant.

More recently, Continental AG, the world's second-largest auto-parts supplier, also warned investors its profits could take a hit this year, blaming softer demand for cars in Europe and China.

"The slowdown comes at a very difficult time as [the industry] transitions to more electrification and the robocar arms race sucks up research and development money," said Dave Sullivan, an analyst with consulting firm AutoPacific Inc.

The weakening outlook comes as firms grapple with higher steel and aluminum prices stemming from new tariffs imposed by the Trump administration this year. Stiffening emissions regulations in Europe and China are also forcing auto manufacturers to spend billions of dollars on new technologies to curb tailpipe pollution.

Global auto sales have increased steadily since 2010, rising on average more than 5% annually. This year, car sales are on track to hit 97 million vehicles world-wide, but the growth rate is expected to slow to 1.8% over 2017, according to forecasting firm LMC Automotive.

Mr. Trump has threatened to impose additional tariffs on the auto industry and has said he sees such threats as a way to extract concessions from the country's trading partners. In May, the White House asked the Commerce Department to investigate whether it could use a national-security law to impose tariffs of up to 25% on cars and auto parts imported into the U.S.

Such actions could further crimp car sales, auto makers and analysts say. "This would produce a near standstill in the vehicle markets," said Justin Cox, a senior analyst with LMC Automotive. The firm forecasts that, if the trade dispute escalates, new-car sales in 2020 are likely to come in three million vehicles lower than current forecasts.

In China, the slowdown in the new-car market comes after years of rapid growth driven in part by the wealth amassed by an expanding middle class. Auto makers have spent billions building

factories and diversifying their lineups in China, now the world's largest auto market by sales with 28.6 million new-vehicle sales last year, according to LMC.

But the government recently ended a popular tax incentive on new-car purchases that had helped fuel demand.

China's move to impose a retaliatory import duty of 40% on cars imported from the U.S. also has hurt business, especially for BMW and Mercedes-Benz maker Daimler—both of which sell American-built SUVs in the country that are subject to the tariff. BMW has raised prices on its U.S.-made vehicles sold in China.

New-car sales in China fell 5.3% to 1.59 million in July, compared with the year-earlier period, surprising investors and causing auto makers to rethink their forecasts. For the full year, sales are forecast to grow 1.2% over last year, according to LMC Automotive, down from a 13% growth rate in 2016 and 2.1% in 2017.

Ford in July cut its full-year profit guidance after reporting weaker-than-expected results in China and Europe, two key markets where it lost money in the second quarter. FCA also has reduced its profit forecast for 2018, blaming poor performance in China.

Both Ford and FCA had been counting on the Chinese market to reduce their dependence on North America. U.S. auto sales, having peaked in 2016 at a record 17.5 million, are on track to decline in 2018 for a second year in a row.

In Europe, new-car demand has nearly returned to its pre-financial crisis peak. Sales of new cars in the European Union were up 2.9% in the first half, but that is down from the 4.7% growth posted in the first half of 2017.

Trade tensions with the U.S., the threat of a diesel-engine ban on the continent and weaker consumer confidence in the U.K.—Europe's second-largest car market—in the wake of the vote to leave the EU have sapped sales growth within the past year.

Auto makers will need to look at Eastern Europe and emerging markets, such as India and Africa, for new pockets of growth, analysts say.

"More auto makers are going to explore how to grow further in inland China and what it will take to grow in Africa," said Mr. Sullivan with AutoPacific.

#### **42. United Airlines Longest Biofuel Flight; Pledges To Cut GHG Emissions 50% By 2050**

United Airlines has operated the longest non-stop transatlantic biofuel journey to date when a 30/70 blend of biojet produced from Carinata oilseed and conventional jet fuel powered a Boeing 787 flight from San Francisco to Zurich. The biofuel content of 16,000 gallons was refined and supplied by World Energy's AltAir Fuels plant in Paramount, California. United says it is the first airline globally to use sustainable aviation biofuel on an ongoing daily basis and has sourced more than 2 million gallons since 2016. It claims responsibility for over half of the industry's current commitments to biofuel usage. To mark the flight, the airline said it was becoming the first US carrier to publicly pledge to reduce its greenhouse gas emissions by 50% by 2050 from a 2005 level. United CEO Oscar Munoz said with rising fuel prices, the financial case for sustainability was clear.

“At United, we believe there is no point in setting challenging and ambitious goals without also taking tangible steps towards achieving them, especially when it comes to securing the health of our communities and our planet,” said Munoz. “While we’re proud to be the first US carrier taking such an ambitious step, it is a distinction we look forward to sharing as the rest of the industry catches up and makes similar commitments to sustainability.”

In an op-ed on Business Insider, he said if other airlines did so then they would learn that cutting emissions and “doubling down on sustainable aviation fuel was the surest way to control cost and help boost profits.” The price of oil had gone up by nearly 50% in the past year and was costing his airline more than \$15,000 every minute, more than its combined spend on ground operations, facilities and landing fees, he said.

“Regardless of whether oil prices rise or fall, the inherent volatility and environmental impact of fossil fuels exert their own costs, to the bottom line, the customer and the planet. The ultimate hedge against those costs is to transition to alternative and renewable sources of energy.”

Carinata seeds are sold by Canadian agri-tech company Agrisoma Biosciences and claims growers in place throughout the Americas and Australia, where Carinata is grown as a second crop to complement existing crop production, enabling additional income and soil health benefits for farmers. The harvested grain is crushed to recover the oil to produce jet biofuel and, as a by-product, high-protein animal feed. It is the first oilseed to be certified by the Roundtable on Sustainable Biomaterials.

Commenting on the United flight, Agrisoma CEO Steve Fabijanski said: “At 11 hours, it is the longest transatlantic biojet flight undertaken to date and with the fuel-efficient Boeing 787, represents the lowest carbon footprint commercial flight across the Atlantic. It is our second international biojet flight powered by Carinata, but there are more to come.”

Earlier this year, biofuel produced from Agrisoma’s Carinata and also supplied by World Energy was used in a Qantas flight from Los Angeles to Melbourne.

United Airlines is already investing more than \$30 million in California-based waste-to-biojet producer Fulcrum Bioenergy, which it says is the single largest investment by any airline in alternative fuels, and the deal to purchase nearly one billion gallons of biojet from the producer is the largest offtake agreement so far by an airline.

To meet its 50% GHG reduction pledge, in addition to expanding the use of sustainable aviation fuels, United said it would continue to invest in new fuel-efficient aircraft and implement further operational changes to conserve fuel.

### **43. In 2018, the Use of Electric Buses Will Reduce Fuel Consumption by 233,000 Barrels**

For some time, few people took the notion of an electric bus seriously. In 2011, Chinese automotive manufacturer BYD Co. revealed an early model at an industry conference in Belgium and was met with laughter. Isbrand Ho, managing director of BYD in Europe, remembered the laughter from that day directed at BYD for “making a toy,” but continued, “And look now. Everyone has one.”

Presently, and in a relatively short period of time, battery-powered buses have progressed to serious contenders in changing city transportation for good, as well as a strong addition to the reconfiguration of the energy industry on a global scale.

It is unusual that this powerhouse of a concept was conceived and initially put forth in China — where carbon emissions run high and air quality is fairly consistently poor — yet, the concept is already beginning to reduce demands for fossil fuel.

In 2017, China had about 99 percent of the 385,000 electric buses on roads in their possession, which is 17 percent of the country's entire supply of buses. Every five weeks, Chinese cities add 9,500 zero-emissions buses to their supply, or about as many buses as London's entire operational fleet, according to Bloomberg New Energy Finance (BNEF).

An average bus consumes 30 times the fuel of an average car, and thanks to electric buses, the demand for fuel is decreasing. However, this is hurting the fuel industry.

According to BNEF calculations, for every 1,000 battery-powered buses on the road, about 500 barrels a day of diesel fuel will go unused; for 2018, the volume of unneeded fuel may rise 37 percent to 279,000 barrels per day — 233,000 being from electric buses alone — due to electric transport, which also includes cars and light trucks. This is roughly about as much oil as Greece consumes, according to BNEF.

Colin McKerracher, head of advanced transport at the London-based research unit of Bloomberg LP, said on the matter, "This segment is approaching the tipping point. ... City governments all over the world are being taken to task over poor urban air quality. This pressure isn't going away, and electric bus sales are positioned to benefit."

China, which for some time was notorious for worst pollution rates in the world, is growing in urban population and therefore rising in demand for energy. The need for electric automobiles or other emissions-reducing solutions is high, as smog resulted in 1.6 million deaths in 2015, according to Berkeley Earth, an environmental nonprofit.

Ten years ago, Shenzhen was booming and the environment was not a primary concern. Infamous for the smog that accompanied its profitable businesses, the Chinese government selected the city to participate in a program for energy conservation and zero emissions vehicles in 2009. In the following two years, the first electric buses made their appearances off of BYD's production line.

BYD, holding 13 percent of China's electric bus market in 2016, sent 14,000 vehicles to the streets of Shenzhen — and 16,359, as of this past May. Thus far, the company has built 35,000 buses and can build up to 15,000 annually, according to Ho, and the company also estimates its buses have traveled 17 billion kilometers, or 10 billion miles, and saved 6.8 billion liters, or 1.8 billion gallons, of fuel since inception. Ho explained that these numbers equate to 18 million tons of carbon dioxide pollution averted, the equivalent of roughly that which 3.8 million cars generate each year.

"The first fleet of pure electric buses provided by BYD started operation in Shenzhen in 2011. Now, almost ten years later, in other cities, the air quality has worsened, while — compared with those cities — Shenzhen's is much better," Ho told BNEF.

#### **44. Cummins Unveils New Emissions-Control Concept; Sees Diesel Remaining Strong**

Cummins Engine announced a concept diesel emissions system at the IAA Commercial Vehicles Show in Hannover, Germany, that the company says will increase fuel efficiency and cut emissions to levels “previously thought unfeasible.”

The concept emissions control system now under development by Cummins combines turbocharged air management with the exhaust aftertreatment as a single close-coupled system, together with a new rotary turbine control.

This new design utilizes Cummins latest advances in air and thermal management to immediately convert almost all NO<sub>x</sub> emissions to clean gas as it interacts with the selective catalytic reduction (SCR) unit. The large NO<sub>x</sub> and particulate matter reductions may invite a possible next level of Euro VII regulations anticipated during the coming decade.

“While Cummins has a vigorous electrification program underway, our other key message at IAA is that the diesel engine is not standing still,” said Tim Proctor, Cummins executive director of product management & market innovation. “With our technical advancements, we see diesel remaining as the primary source of power in the commercial vehicle sector for the foreseeable future. Cummins is committed to ensuring the power of choice is available for our customers’ many different vehicle types, duty cycles and business requirements.”

Other technologies under development at Cummins look to reduce friction and parasitic losses in diesel engines. “Additionally, the use of enhanced design tools and advanced materials such as composites will bring opportunities to reduce component weight while retaining strength, further enhancing vehicle productivity,” Proctor added.

#### **45. Many Diesel Car Models Eliminated in 2018**

Car manufacturers are moving away from diesel cars after the fuel type has suffered from a number of difficult years. The dieselpgate scandal sparked intense scrutiny and backlash from the car industry and has since seen many motorists and carmakers turn their back on the fuel type.

New regulations and pressures on diesel cars are set to be introduced over the coming years. This has seen many carmakers ditch the fuel type or at least specific cars from its lineups.

One such regulation is the new World Harmonized Light Vehicle Test Procedure (WLTP) standard which is replacing the New European Driving Cycle (NEDC). It should reduce discrepancies in lab results and real world driving emissions. As a result, fuel economy and CO<sub>2</sub> emissions figures could change.

Sales of new diesel cars have also tumbled dramatically by around a third over the course of the past year. According to a list compiled by Autocar, there have been at least 16 different diesel models ditched in 2018.

A number of car brands have declared that they will be ditching diesel cars from their line-ups including Fiat Chrysler by 2022. Volvo stated that it would not be introducing more new diesel cars post-V60 launch and Subaru, Suzuki and Porsche have ditched diesel due to a lack of demand.

Some carmakers have removed diesel engine options from popular car line-ups either due to a lack of demand or to meet emissions standards. These include the Fiat 500X, Kia Rio, Mitsubishi Outlander and Vauxhall Corsa.

Other models that have been ditched include the Honda CR-V, Kia Venga, Mitsubishi ASX, Mitsubishi Outlander, Porsche Macan, Porsche Panamera, Seat Toledo, Skoda Fabia, Toyota Avensis, Toyota RAV4 and Toyota Verso.

Here is a list of cars to be eliminated from the market:

- Fiat Chrysler Automobiles (Alfa Romeo, Fiat, Jeep, Maserati): Fiat 500X, all models by 2022
- Honda: CR-V
- Kia: Rio, Venga
- Mitsubishi: ASX, Outlander
- Porsche: Macan, Panamera
- Seat: Toledo
- Skoda: Fabia
- Suzuki: Vitara, SX4 S-Cross
- Toyota: Avensis, RAV4, Verso
- Vauxhall: Corsa
- Volvo: All new models

#### **46. Air Pollution Adversely Affecting Test Scores**

Pollution has long been associated with damaging side effects on the human body, causing respiratory problems, heart and liver dysfunction, as well as fatigue, headaches, and lower life expectancy. Now, new research shows the its effects stretch much further than that and may adversely affect brain activity.

A recent study published by the U.S. National Academy of Sciences, "The impact of exposure to air pollution on cognitive performance", connects pollution levels to test scores in language and arithmetic. The research conducted in China concludes that polluted air hinders cognitive ability, especially as people become older. The more time people spend in a polluted environment, the poorer their brain functions, the research finds.

"We find that accumulative exposure to air pollution impedes verbal test scores," states the study published in the August edition of Proceedings of the National Academy of Sciences of the United States of America, a scientific journal.

At the same time, long-term exposure to pollution affects people more than short-term exposure, the study reveals. The results are particularly useful for those in charge of environment strategies conducive to cleaner air, say the authors.

"We can (encourage) people to avoid exposure and subsidize air filters, but this might not be as effective as we thought because the long term accumulated levels affect people more," says Xi Chen, assistant professor of health policy and economics at Yale University and co-author of the study. "Policies need to focus on cleaning up the air instead of avoiding people's exposure because everyone is exposed to outdoor and indoor air pollution and we cannot avoid it 24/7."

The study examined 25,000 individuals aged 10 to 92 in 25 provinces across China. People were asked to answer 24 standardized mathematics questions and 34 word-recognition questions. The results were later connected with data about air quality published by the Chinese Ministry of

Environmental Protection. The research concluded that polluted air hindered cognitive ability, especially as people became older. Simply put, the more time people spent in a polluted environment, the poorer their brain functioned.

As people age, the negative effects are more serious, the study revealed. This can have economic consequences, Chen says. "The damage on the aging brain by air pollution likely imposes substantial health and economic costs, considering that cognitive functioning is critical for the elderly for both running daily errands and making high-stake decisions," the study reads.

Those economic costs may weigh heaviest on developing countries. According to the World Health Organization, or WHO, more than 80 percent of people living in urban areas where pollution is measured breathe low-quality air. The top 20 most polluted cities can be found in developing countries, while almost all cities in low- and middle-income nations with more than 100,000 people don't meet the WHO standards. Outdoor air pollution in urban and rural areas caused about 4.2 million premature deaths globally in 2016. According to WHO, this is due by small particles that once in the body lead to cardiovascular and respiratory disease, as well as cancer.

The study also found that men are more likely to be affected by high levels of air pollution than women. The research also suggests that pollution may affect male admissions into college. Without considering other factors, males in polluted environments will perform worse than females in college entrance examinations, the research asserts.

The study also states that pollution has a direct impact on decision-making, attitudes toward risk and behavior. This research should not be seen as particular to China but should be considered in all other parts of the world, because air pollution is a global issue, Chen says.

The research from China builds on earlier findings tying air pollution to brain activity. Air pollution may be adversely affecting brain development of young children, according to a far-reaching study published last November by UNICEF, the U.N. agency that provides humanitarian and developmental assistance to children and mothers in developing countries.

#### **47. Ricardo: Report Shows Life Cycle Analysis Is Crucial For Environment**

A new study by Ricardo for the Low Carbon Vehicle Partnership (LowCVP) aims to push the boundaries of knowledge of Life Cycle Assessment, an increasingly important area of research in the area of road transport.

As new types and technologies of vehicles enter the market place and as electrification of road transport becomes mainstream, the ability to assess emissions 'beyond the tailpipe' to provide the basis for better regulation and more effective policies, will become more and more important. Life Cycle Assessment (LCA) is about taking a holistic approach to the analysis of a product's total environmental impact.

The report looks across a broad range of vehicle sectors for the first time and finds that the relative contribution of each vehicle life cycle stage is highly dependent on the vehicle type and powertrain technology as well as what assumptions are made about a vehicle's operational life, mileage and duty cycle.

For electric and plug-in hybrid vehicles the carbon intensity of the power grid is, of course, also a key factor in terms of the vehicle's full life cycle emissions. Well-to-wheel CO<sub>2</sub>e emissions of

current electric vehicles are already significantly lower (40-60 percent) as a proportion of full lifetime emissions than those of typical current passenger cars (70-85 percent) and this difference can increase as the electricity grid becomes increasingly decarbonized. However, if a race for bigger and bigger batteries is left unchecked, EVs doing low mileages could undermine some of the potential benefits.

The environmental impacts associated with the production phase, in particular, for road vehicles will become increasingly important in the context of the full life cycle and, therefore, the focus of more policy attention as the UK and other governments around the world strive to meet greenhouse gas (GHG) emissions reduction targets in order to tackle climate change.

The Ricardo study focuses on providing insights into how life cycle CO<sub>2</sub>e emissions vary by vehicle segment and powertrain technology. It considers 'L-category' (micro) vehicles, passenger cars, heavy duty trucks and buses across four life cycle stages – vehicle production, fuel production, vehicle use and vehicle end-of-life.

For larger, heavy duty trucks, life cycle CO<sub>2</sub>e emissions are overwhelmingly from vehicle use (>95 percent); unsurprising given the high utilization and lifetime mileages of these types of vehicles. In this sector using lower carbon fuels and energy sources will deliver the greatest carbon reductions in the near term.

For smaller vehicles, such as passenger cars and micro vehicles, there is much greater sensitivity in each life cycle stage; often more than 50 percent of the overall impact comes in the manufacturing stage.

This new analysis – Understanding the life cycle GHG emissions for different vehicle types and powertrain technologies – builds on earlier work for the LowCVP, including the 2011 report Preparing for a life cycle CO<sub>2</sub> measure, also by Ricardo.

#### **48. 26 Entities Commit To Zero Emission Vehicle Targets**

In the biggest collective demonstration of the demand for electric vehicles to date, 26 states, cities, regions and businesses have simultaneously announced 100 per cent zero emission vehicle targets. These programs, developed and run by The Climate Group and C40 Cities, range from taking business fleets and employee benefit cars electric by 2030, to cities procuring only electric buses from 2025.

For the first time ever, international states and regions in the Under2 Coalition are joining forces.

Zero emission areas in cities are set to become a truly global phenomenon as 12 more cities confirm their commitment, including the Asian megacities of Tokyo and Seoul.

Collectively the targets these governments and businesses are signing up to will vastly increase the number of zero emission vehicles on the road, bringing the numbers up towards the levels necessary by 2030 to deliver on the ambition of the Paris Agreement.

Coming together under the mantle of the #ZEVchallenge, international NGOs The Climate Group and C40 Cities, inspired by the Global Climate Action Summit, have linked-up their programs for states, cities and businesses (Under2 Coalition ZEV Commitment, Green and Healthy Streets and EV100).

The commitments also include actions on infrastructure, to support consumers and businesses to charge their vehicles.

The 12 states and regions committing to Under2 Coalition Zero Emissions Vehicle Challenge are Australian Capital Territory, The Basque Country, Broward County (Florida), Catalonia and Navarra (Spain), Drenthe (The Netherlands), Emilia Romagna and Lombardy (Italy), Quebec (Canada), Scotland (Britain), Washington and California (US).

Two businesses newly committing to EV100 program, run by The Climate Group - Clif Bar and Delta Electronics, bringing the total of EV100 businesses to 23.

The #ZEVchallenge is designed to not only inspire more businesses, states and cities to set ambitious targets but also to push automakers to speed up their plans to put zero emission vehicles on the road, and raise their ambition, in time to achieve the Paris Agreement.

Gelen Clarkson, CEO of the Climate Group, said: "Today's announcement opens a new frontier for the global auto industry. Its biggest customers, public and business fleets, are demonstrating their demand for a huge increase in EVs over the next decade."

In less than a year, over 60 states, regions, cities and multinational businesses have committed to a zero-emission future. They represent a total population of over 237 million and corporate revenue of over \$480 billion.

The Climate Group and C40 Cities believe the linkage between these sectors will be critical for the future:

- Workplace charging with state and city support for home charging will tackle 'range anxiety' for the vast majority of journeys.
- Highly visible public fleets going electric will make it seem like the norm for consumers.
- Zero emission areas will encourage more businesses to go electric if they wish to continue to operate in city centers. Crucially for the automakers there is a prospect of major fleet buyers working more closely together to encourage more electric cars on the road and to drive down costs.

#### **49. How the World's Oil Refiners Plan to Grapple With Their Fuel Oil Output After 2020**

High-sulfur fuel oil, essentially the leftovers of an oil refiner's output, will still flow from refineries around the world even after new rules start up in 2020 curtailing its use in the global shipping fleet, a Reuters survey showed. Sixty percent of the 33 refineries contacted by Reuters in a global survey will still produce high-sulfur fuel oil (HSFO) in 2020 although the supply will tighten as 70 percent of these refiners plan to reduce their output.

Starting that year, ships will have to use marine fuel, which primarily consists of residual fuel oil, with a maximum sulfur content of 0.5 percent under International Maritime Organization (IMO) rules to reduce air pollution. Currently, the global shipping fleet, which includes oil and chemical tankers as well as container ships, uses as much as 3.3 million barrels per day of HSFO with a maximum of 3.5 percent sulfur.

Refiners will have little incentive to produce HSFO after the regulations though some demand will remain as a small but growing number of vessels are fitted with smokestack scrubbers that remove the sulfur from the exhaust fumes and power plants will continue to consume the fuel.

"Although HSFO demand for ships is expected to decline substantially in 2020, the oil's demand for power generation and general users will remain," Japan's second-largest refiner Idemitsu Kosan told Reuters in the survey. "In future, demand for scrubber-equipped ships is projected to recover, so we expect HSFO output to continue."

When asked how they plan to reduce HSFO output, just over half of the refiners said they will upgrade their plants to further process their fuel oil to produce more higher value products such as gasoline and diesel.

Two-thirds of the 16 refiners who responded to a question about how much investment they plan to pump into their plants to produce more ultra-low and low-sulfur fuel oil, said they plan to spend less than \$100 million. Five of them are investing between \$500 million and more than \$1 billion in such projects.

Polish refiner Grupa Lotos will spend more than \$600 million to convert its heavy residue to middle distillates and coke by the end of 2019 while Kuwait has a \$6.25 billion clean fuels project.

Fuel oil, or residue fuel, is the remaining product from crude oil processed through crude distillation units at a refinery. To extract more value from residue, it is further processed at secondary refining units such as residue fluid catalytic crackers, hydrocrackers and cokers to produce gasoline and diesel.

However, secondary units are costly and require years to build while expansion projects in some countries have to overcome tough environment regulations.

"We will need [the Environment Protection Agency's] approval if we want to expand the coker and that is tough in Taiwan now," Formosa Petrochemical Corp spokesman KY Lin said. Formosa has adjusted its coker unit, which uses heat and pressure to break down the residue fuel into other products, to run at 95 percent utilization from 90 percent to reduce its HSFO output, Lin said.

Refiners will want to cut their HSFO output as much as possible to offset the expected drop in value. By January 2020, 380-centistoke HSFO in Singapore will be worth \$16.70 a barrel less than Middle East benchmark Dubai crude, down from a discount of \$5 for October 2018, according to swap values.

Besides upgrading, a handful of refiners said they would also process more lower sulfur crude oil to reduce the sulfur content in their products output.

Refiners may also cut their overall CDU runs to reduce their residue output if low fuel oil margins drag down overall profits, according to the survey.

"Forward prices are scary," Formosa's Lin said.

Other refiners will look at alternative markets for their HSFO. "If fuel oil demand falls, we will switch our configuration to produce bitumen which is in high demand in India due to its road-building program," said an official from Indian Oil Corp.

Some refiners prefer to stay flexible by being able to switch their output between low- and high-sulfur fuel oil according to market demand. India's Bharat Petroleum Corp said it will be able to produce either fuel oil or switch to other products depending on demand after 2022. "We will not reduce fuel oil output to zero completely as we need our refineries to be flexible," a BPCL official said. The official declined to be named as they are not authorized to speak to the media.

Italy's Eni said it "will produce the minimum amount of HSFO just to satisfy the market demand of the ships that will have installed the scrubbers."

An official from India's Hindustan Petroleum Corp said the company will be producing some fuel oil but the output will be "very, very low beyond 2022."

A third of the respondents said they are either already not producing any HSFO or will stop producing in 2020.

Polish refiner Orlen said it will produce fuel oil with 1 percent sulfur content from 2020 while a spokeswoman from Italy's Saras refinery said, "We are already ready to face IMO-2020 and we already produce basically no HSFO."

Canada's Husky Energy spokesman Mel Duvall said the company expects to benefit from the new IMO rule since it will boost diesel demand. "It is expected that there will be an increase in global demand for diesel fuel as ship operators switch from high-sulfur fuel oil," he said.