EUROPE

1. EC Announces ‘More Transparent’ Emissions Testing Proposal
3. UK’s Dirty Air Still ‘A Public Health Emergency’ Despite Dramatic Fall In Death Rates
4. Air Pollution Remains Too High In Nearly 60 German Cities – Environment Agency
5. 16 EU Countries ‘Not On Track’ For Air Pollution Reduction Goals
6. Car Industry Faces ‘Petrolgate’ As CO2 Figures Don’t Stack Up
7. Europe Experiences Record-Breaking Temperatures For June
8. Booming SUV Sales Drive Increase In Average CO2 Emissions From Cars
9. Member States ‘Failing On Transport’ In National Climate Plans
10. EU Considers Measures To Reduce Emissions And Noise In Aviation
11. Moscovici: Commission ‘Ready To Work’ On Aviation Tax
12. Netherlands, Sweden Urge EU Members to Back Aviation Fuel Tax
13. Report Sounds Alarm Over Air Pollution From Cruise Liners
14. European Shipping Reports 150m Tons Of CO2 Emissions In 2018
15. Barcelona To Receive 100+ New Electric Buses, Replacing Diesel Buses
16. Member States Must ‘Step Up’ Investment In Clean Bus Infrastructure
17. ‘Unacceptable’ That Majority Of Dirty Diesels Still On EU Roads
18. Truck Makers Could Fund Low-Carbon Fuel Technology, Refiners Say

NORTH AMERICA

19. Latest Developments in Trump Vehicle GHG Rollback
EPA, California Engage In Sharp War Of Words
Former EPA Engineer on Wheeler’s Claims: ‘This is a Lie’ Nichols is Right
Trump Administration Readyng Final Review
California, Autos Mull Steps To Manage Aftermath Of GHG Rule Rollback
Laggard Fiat Leans Toward Trump in Industry Anxious Over Emissions Rules
High Court’s Census Decision Could Bolster Suits Over Trump EPA Rollbacks
Canada & California Agree to Support Clean Transportation
EUROPE

1. EC Announces ‘More Transparent’ Emissions Testing Proposal

The European Commission recently tabled a legislative proposal on NOx conformity factors for vehicle emissions testing. Conformity factors represent the permitted legal gap between emissions measured in laboratory conditions and real driving emissions testing that new car and van models have to undergo before being placed on the EU market.

The new Commission proposal does not change the conformity factors, but only the procedure under which they are adopted, in response to a ruling by the European Court of Justice (ECJ). In December 2018, the ECJ's General Court annulled the conformity factor of 2.1 until 2020 and a revised factor of 1.43 after 2020. It said that such rules should not have been adopted via the closed-door ‘comitology procedure’, where decisions are made by national experts and the final text is rubber-stamped by the European Parliament and Council. Instead, the Commission should have followed the ordinary legislative procedure.

Although the Commission appealed the ruling earlier this year, on Friday it proposed reininserting the same conformity factors into the legal text. These will now have to be adopted by the European Parliament and Council in a more transparent procedure that could lead to amendments.

“This is an opportunity to bring down the second and ‘technical’ NOx conformity factor of 1.43,” said Florent Grelier of green group Transport & Environment, which has been calling for a smaller permitted gap between real driving and laboratory emissions. “This should be based on the most recent data from the most recent, advanced and available Portable Emissions Measurement Systems,” he told the press.

Real driving emissions testing has been used since September 2017 as a complement to laboratory testing, after it was found that air pollutants emissions measured on the road substantially exceeded those measured in laboratory. The conformity factor is subject to annual review, with the next review planned for the end of 2019.

To avoid legal uncertainty on the model approvals granted since 1 September 2017, the European Court of Justice delayed the effects of the December ruling until February 2020, giving the time to the Commission to implement the judgment.


The lower chamber of Britain’s Parliament approved a move to toughen targets on fossil fuel pollution, setting a goal of reaching a level of net zero by 2050.

The House of Commons agreed without a vote Monday to amend the existing law. If the upper House of Lords agrees to do the same on June 26, Britain will become the first major economy to pass a law requiring it to reduce greenhouse gas emissions to the point where it makes no net contribution to rising global temperatures.

The move will give Prime Minister Theresa May something to point to as a legacy from her troubled three years in office. While Chancellor of the Exchequer Philip Hammond raised concern about the costs of the new goal, May has said cutting pollution doesn’t have to harm economic
growth. She said she was inspired to adopt the goal after seeing retreating glaciers while holidaying in the Swiss Alps.

Britain has slashed carbon dioxide output 44% since 1990 to the lowest levels since the 1890s, according to data from the Department for Business, Energy and Industrial Strategy.

Labor economic spokesman John McDonnell has said he will explore bringing forward the target date if Labor wins power. He’s also pledged to close a loophole in the current law so as to include emissions that are “imported” via goods manufactured in other countries, such as China.

3. UK’s Dirty Air Still ‘A Public Health Emergency’ Despite Dramatic Fall In Death Rates

Government action can cut air pollution, a long-term study has shown, with early deaths linked to dirty air in the UK falling by half between 1970 and 2010. But toxic air remains the number one environmental health hazard, with one in 20 deaths still attributable to small particle pollution alone. The researchers said urgent action was needed to deal with a public health emergency that caused harm comparable to alcohol.

Cleaning up power stations and vehicles led to a fall in most pollutants in the four decades analyzed. But ammonia from farms, which mixes with city air to form dangerous particles, has yet to be stringently tackled, the scientists said, and ozone pollution has risen.

“The message is that air quality policies work, but at the same time the current burden of air pollution on health is still very, very substantial,” said Sotiris Vardoulakis of the Institute of Occupational Medicine in Edinburgh, one of the research team. “It is a public health emergency and we need to do something about that.”

Even though air pollution has been falling over the years in the UK, understanding of the damage it causes to health is growing rapidly. A recent review found air pollution may be damaging every organ and virtually every cell in the human body, affecting physical, mental and reproductive health.

In October, the head of the World Health Organization said dirty air was the “new tobacco”. In the UK, the main air pollutants are above legal or WHO limits in most urban areas, although experts agree there is no safe level.

The research, published in the journal Environmental Research Letters, used pollutant emissions data and modelling to calculate the concentration of air pollution across the UK over four decades. Researchers took account of variations caused by the weather, so the results showed the impact of clean air policies.

Sulfur dioxide, a cause of acid rain, fell most sharply after coal power stations were targeted. More recent falls in small-particle pollution and nitrogen dioxide (NO2), which are produced by cars, track the rise of stronger European Union vehicle regulation. This has had an impact despite the widespread cheating by carmakers exposed by the Dieselgate scandal.

The researchers found the proportion of all deaths attributable to small particle pollution fell from 12% in 1970 to 5.2% in 2010. The deaths linked to NO2 fell from 5.3% to 3.0% over the same period. The health impact remains at levels similar to 2010 today, with small particles and NO2 causing an estimated 36,000 early deaths a year.
Prof William Collins of the University of Reading, who was not part of the research team, said the fall in pollution was a success story. However, “these past policies focused on the ‘low-hanging fruit’ and further improvements in mortality will be more challenging”.

The environment minister Thérèse Coffey said: “We have taken huge strides in tackling air quality over the last 40 years. But we know there is a lot more to do. We have clear plans in place to tackle roadside nitrogen emissions and agricultural ammonia and are working to accelerate progress.”

The government’s latest clean air strategy was produced after the high court declared earlier plans illegal three times in succession. The government’s own research shows that charging people for driving polluting vehicles into urban centers is the most effective measure, but ministers have said this should be only a last resort.

Vardoulakis said enabling more people to walk, cycle and use public transport more would make a big difference, and bring additional benefits. “These improve physical and mental health and reduce the greenhouse gas emissions” that are driving the climate crisis.

Phasing out petrol and diesel cars in favor of electric vehicles is also important, though ministers have set a later date for this than some other countries.

4. Air Pollution Remains Too High In Nearly 60 German Cities – Environment Agency

The level of air pollution, mostly due to nitrogen dioxide (NO2) emissions from traffic, has exceeded European limit values in 57 German cities in 2018, the Federal Environment Agency (UBA) has found. However, the number of cities with emissions levels above the threshold of 40 micrograms per cubic meter has fallen from 65 in the year before, the UBA says. “The air quality in our cities is improving and trends are pointing in the right direction,” said UBA president Maria Krautzberger. “But you can also see that the measures agreed on so far are insufficient to abide by the EU-limit value for NO2 in the annual average to protect public health,” Krautzberger added.

She said there not only had to be more software updates for manipulated diesel cars, a major source of NO2, but also mechanical retrofits of older diesel cars with catalyzers. She called on carmakers to “support customers financially” in doing so. While NO2 emissions in the annual average sunk below the EU limit in 13 cities, they were climbing back up again in others, including bigger cities like Leipzig or Ulm. The UBA warned that other sources of pollution also had to be considered more, for instance wood burning in private households, agriculture, and tire wear particles from cars.

Several German cities had to introduce diesel bans on certain roads after a court ruled that this was necessary to bring down pollution levels. The German government has tried to avoid bans by implementing several measures aimed at reducing emissions levels. Scientists remain skeptical about the effectiveness of driving bans to bring down pollution levels, with many advocating for a city toll instead to reduce traffic volumes across the board. Already in January, the UBA stated that nitrogen dioxide emissions in the country had been in decline in 2018, citing local measures such as speed limits, traffic restrictions, renewal of vehicle fleets and the weather as reasons.

5. 16 EU Countries ‘Not On Track’ For Air Pollution Reduction Goals
Over half of the EU’s member states do not consider themselves to be on track to meet their 2020 goals to cut emissions of at least one main air pollutant, according to the European Environment Agency (EEA).

In a new briefing, the EEA notes that total emissions for nitrogen oxides (NOx), non-methane volatile organic compounds (NMVOCs), sulfur dioxide (SO2) and ammonia in 2017 were beneath EU-wide limits.

However, six member states exceeded national limits for ammonia, as set out under the National Emissions Ceiling (NEC) Directive, with the situation set to worsen because of rising emissions from the agriculture sector across the EU.

Some 13 member states have indicated they expect to miss their 2020 commitments to cut ammonia emissions, including Germany, France, Ireland, Sweden and Hungary.

In total, 16 member states reported that they were not on track to meet their 2020 commitments for at least one pollutant, with 20 saying they will miss one or more of their 2030 goals, as established in the revised NEC Directive from 2016, without further steps to curb air pollution.

At an EU-level, emissions of NMVOCs and SO2 were already below the 2020 targets. But further reductions of 2.3% and 1.3% from 2017 levels are required for ammonia and fine particulate matter (PM2.5) respectively. Reducing NOx emissions requires the greatest effort to meet the target, with a reduction of 3.2% required.

The EU as a whole needs to reduce NMVOC and ammonia emissions by 15% by 2030, based on 2017 figures, more than 30% for PM2.5 and SO2, and almost 40% for NOx, according to the agency.

Seventeen member states have set out measures to meet the 2030 targets in their National Air Pollution Control Programs (NAPCPs), which all countries were meant to have submitted by April 2019, but the EEA says “further efforts are clearly required”.

6. Car Industry Faces 'Petrolgate' As CO2 Figures Don't Stack Up

The automotive industry could be facing a new 'petrolgate' emissions scandal as Emissions Analytics uncovers discrepancies in new petrol car CO2 figures.

Following the fallout of 'dieselgate', which led to a considerable decline in sales of diesel vehicles across Europe, experts believe the same emissions cheating techniques may be being used on petrol vehicles.

Results from the latest WLTP-certified vehicles show that average CO2 emissions for petrol cars are falling, but real-world testing carried out by Emissions Analytics paints a different picture. “While our real-world test results for diesel cars are in line with WLTP data, indicating that manufacturers have got their house in order over diesel, the same cannot be said for petrol,” explained Nick Molden, CEO of Emissions Analytics.

While all cars sold from September 2018 must be WLTP-certified, the CO2 figure that is published for the vehicle is still based on the old NEDC value, using a back-translation.
According to Emissions Analytics, the real-world emissions for petrol cars are not going down, despite the official published figures suggesting they are. It says the EQUIA real-world average for petrol cars is currently 185g/km, considerably higher than the 151g/km WLTP-reported figure, whereas the figures for diesels are largely aligned (175g/km vs 173g/km).

Emissions Analytics believes there is a significant discrepancy in relative certification values for petrol vehicles, despite no change in real-world performance as measured by the EQUIA Index. It concludes that optimization of the lab-based WLTP test has already set in, with car makers adapting petrol vehicles to perform better in the WLTP test than they do on the road in actual driving conditions.

With the increased market share of petrol vehicles post-Dieselgate, reduced CO2 emissions from these vehicles will have the largest impact in meeting fleet average emissions targets.

“This would make WLTP questionable as a source for gathering actionable data, much like NEDC that preceded it,” said Molden. “It is also worth pointing out that the EQUIA Index currently shows real-world emissions sitting well above the EU headline 130g/km fleet average target for CO2, which suggests official data flatters how much CO2 is being reduced overall.

“While obtaining laboratory figures should be a useful way accurately to benchmark vehicles, there is a severe lack of validation and correlation with real-world use. Granted, repeatability suffers when testing on the road, but it severely limits the ability of manufacturers to optimize for the test.”

Emissions Analytics believes that the best solution is for a simple and comprehensible certification program, combining laboratory tests and on-road validation analogous to the Real Driving Emissions regulations for nitrogen oxides. Real-world surveillance would add extra deterrence to manipulation.

“Until such a system is in place, there will be many more counterintuitive outcomes from an imperfect test regime caught in a switchover phase. There is still fallout from Dieselgate and consumer trust needs to be built back up. The industry really needs to act now to avoid a Petrolgate,” Molden added.

Mike Hawes, SMMT chief executive, responded to the claims. He said: “We strongly reject these misleading claims, which at best betray a fundamental lack of understanding of the testing and regulatory process and at worst look like an attempt to unfairly discredit the industry for commercial gain. On-road testing of CO2 emissions can only ever provide a snapshot of how a vehicle is being driven and cannot be used as a comparison with official test values. In fact, vehicle registration data shows there has been a significant rise in average CO2 values for both petrol and diesel models under WLTP, which is to be expected given the far more demanding test. Further, manufacturers are bound by regulations which specify how test results can be published.

“Car manufacturers are fully aware of their responsibilities and consumers can be assured that new cars on sale today are fully compliant with emissions regulations. The new WLTP testing regime is the toughest in the world, more rigorous and complex than its predecessor and covering a wider range of driving behavior to give fuel economy and emissions figures that better represent results achieved on the road. And because these figures are now provided not just for model ranges but individual vehicles, including optional extras, buyers have more detail to help them choose the most efficient car that best suits their needs.”
Summer has barely begun, but temperature records are already being broken. Data released on July 2nd show that the European-average temperature for June 2019 was higher than for any other June on record. Average temperatures were more than 2°C above normal and it has become the hottest June ever recorded.

Although not as persistent as that of summer 2018, this short heat wave, caused by a mass of hot air coming from the Sahara Desert, was intense. The five days of unusually high temperatures followed days with record-breaking temperatures further east in Europe. This led to the month as a whole being around 1°C above the previous record for June, set in 1999, and about 1°C higher than expected from the trend in recent decades.
Data provided by the Copernicus Climate Change Service (C3S), implemented by the European Centre for Medium-Range Weather Forecasts on behalf of the European Union, show that the global-average temperature for June 2019 was also the highest on record for the month. It was about 0.1°C higher than that of the previous warmest June, in 2016, following a strong El Niño event.

The map of temperature anomalies shown above, based on the latest C3S data, highlights just how unseasonably warm the end of the month was. Compared to the average for the same five days during 1981-2010 (the standard 30-year climatological reference period), temperatures of 6-10°C above normal occurred over most of France and Germany, northern Spain, northern Italy, Switzerland, Austria, and the Czech Republic.

Although it is difficult to directly attribute this heat wave to climate change, such extreme weather events are expected to become more common as the planet continues to warm under increasing greenhouse gas concentrations.

Looking at the temperature data from a longer-term perspective reveals the month to be even more unusual. Merging the latest C3S data with datasets that extend further back in time shows
that the June 2019 European-average temperature was more than 3°C higher than the average for 1850-1900.

Average June temperatures (°C) for Europe (top) and globally (bottom) from 1880 to 2019, shown as differences from long-term average values for 1850 to 1900. June 2019 is highlighted. Data sources: ERA5 (ECMWF, Copernicus Climate Change Service) and HadCRUT4 (Met Office Hadley Centre and Climatic Research Unit, University of East Anglia).

Spikes in European-average June temperature of more than 1°C above normal have occurred several times during the last 150 years; in 1901 and 1917, as well as 1999, for example. The temperature in June 2019 was exceptional because its spike came on top of a general rise of around 1.5°C or more in European temperature over the past one hundred years. This rise in European temperature is notably higher than that of around 1°C seen globally.

Jean-Noël Thépaut, Head of C3S, comments: “Although local temperatures may have been lower or higher than those forecast, our data show that the temperatures over the southwestern region of Europe during the last week of June were unusually high. Although this was exceptional, we are likely to see more of these events in the future due to climate change."

8. Booming SUV Sales Drive Increase In Average CO2 Emissions From Cars
Mean carbon dioxide emissions from new cars registered in Europe increased by almost 2g per kilometer last year – continuing, and accelerating, the reversal of a steady decline totaling 22g between 2010 and 2016. Car makers are now faced with having to sharply reduce the CO2 output of their vehicles this year and next in order to meet EU target emissions standards by the end of the decade, the European Environment Agency (EEA) said as it released preliminary data for the EU and Iceland.

“With the 2021 target of 95g CO2/km approaching, much faster deployment of cars with low emissions is needed across Europe,” the EEA said.

Petrol cars were the most sold passenger vehicles in the EU, according to the report, making up 60% of all new registrations. Diesel vehicles made up 36% of the new registrations, dropping 9% since 2017, and 19% from 2011 when diesel cars peaked with a 55% share of new registrations. The combined shares of plug-in hybrid electric vehicles (PHEV) and battery electric vehicle (BEV) sales were highest in Iceland (15%), Sweden (8.4%) and the Netherlands (6.8%).

Together with Estonia, Finland and Malta, these were the only countries where the average emissions of new cars decreased from 2017 to 2018.

The mean CO2 emission level for cars registered last year was 120.4g/km, including a small number of low and zero-emissions models. The figure for petrol cars was 123.4g. Diesels, which accounted for 36% of the total 4.5m cars sold, emitted on average 121.5g per kilometer in lab-based tests.

The EEA put the increase in emissions down to a continuing switch from diesel to petrol and a growing market share of so-called sports utility vehicles (SUVs), which typically run on petrol and produce on average 133g of CO2 for every kilometer driven. These larger models now account for around one-in-three car sales in Europe.

In addition, sales of fully battery powered, zero emissions cars and hybrid models remained low, albeit up a third on 2017 sales at 2% of the total market.

Transport & Environment noted that only 25 battery electric or hydrogen cars were available in Europe last year, arguing that manufacturers had deliberately suppressed sales, but that this figure was expected to rise to 93 by 2021 as car makers rush to comply with EU targets.

Adding to the challenge facing manufacturers, the data also showed the first recorded increase in emissions from vans, also by an average of 2g, to 158.1g per kilometer. The EU target for light commercial vehicles is 147g, to be achieved by 2020.

The EEA blamed the increase in the mass, engine capacity and size of the average van registered last year, along with the same gradual switch from diesel to petrol-driven models seen in the passenger car market.

Under new EU rules adopted this year, car makers will have to further reduce emissions by 15% in 2025 and 37.5% in 2030 compared to current levels.

Carmakers have acknowledged they could fail to meet EU emissions performance targets in the next two years and face potentially heavy penalties.
The European Automobile Manufacturers’ Association (ACEA) is concerned about the effort that would be required to meet the EU’s 2021 target of an average of 95g. “Under the current scenario, the prospect of fines for not reaching the 2020/2021 CO2 target is, to a varying degree, a serious concern for car makers,” said ACEA.

In April, credit rating agency Moody said that carmakers might face up to €10.69 billion in financial penalties for failing to comply with the new targets. “Obviously, failure to meet these targets would also put manufacturers at a major disadvantage for reaching the recently-set 2025 and 2030 CO2 targets,” the lobby group added.

ACEA highlighted that last year was also the second year when petrol cars, which emit more CO2, compared to equivalent diesel models, were the most sold (8.5 million new registrations compared to 7.6 in 2017), while sales of diesel cars continued to decline (5.4 million compared to 4.2 in 2017). Just under 302,000 electric cars were sold in 2018.

ACEA Secretary General Erik Jonnaert argued that “although the gap between average CO2 emissions from diesel and petrol cars is narrowing, it is still significant”. Stressing that manufacturers are investing “massively” in cleaner technologies, he also said that the latest generation of diesel cars should not be written off, as they “not only emit less CO2 than their petrol counterparts, but also deliver low on-road pollutant emissions in practice”.

The EEA, however, placed part of the responsibility for the CO2 increase on the growing market share of sports utility vehicles (SUVs), which typically run on petrol and are more polluting than lighter cars. Environmental groups accused manufacturers of deliberately pushing sales of heavier, more expensive cars to the detriment of cleaner options.

ACEA, however, put the growth in SUV sales down to consumer preference. Manufacturers “market cars in all segments and have expanded the offer of cleaner vehicles too”, communications director Cara McLaughlin told the press. Carmakers blame the slow uptake of electric vehicles on the lack of charging points and refueling stations.

“According to conservative estimates by the European Commission, at least two million ECV charging points will be needed by 2025. That means there should be roughly a 15-fold increase within the next six years. In 2018, there were 143,609 charging points,” McLaughlin said.

9. Member States ‘Failing On Transport’ In National Climate Plans

National governments have largely failed to include detailed policies on how they will cut greenhouse gas emissions from transport as part of their draft national energy and climate plans (NECPs), Transport & Environment has alleged. In a new assessment of all 28 member states' draft NECPs, the campaign group notes that areas such as aviation and shipping barely receive any attention, while most draft plans remain far too vague on promoting public transport and active travel, or on reducing emissions from trucks, vans and buses.

When it comes to phasing out passenger cars with internal combustion engines (ICEs), the single largest source of transport emissions, national commitments are more mixed, according to the assessment. The report praises Ireland for aspiring to allow only zero-emission vehicles to be sold after 2030, while Denmark aims to continue allowing plug-in hybrids until 2035.

However, in general “most countries have not understood that, in order to decarbonize cars in Europe, the last ICE needs to be sold at the beginning of the decade of the 2030”, the report
states. “It is surprising to see that many countries include targets that are less ambitious than those of part of the car industry itself.”

The promotion of gas and biofuels are also areas of concern for the report’s authors. The EU can expect a “considerable increase” in the use of food-based biofuels, despite its knock-on effects on food and land availability, they say. The UK and France are singled out as among the only countries to include restrictions on the use of food-based biofuels.

Likewise, nine member states have signaled they intend to promote the use of natural gas in transport, although it is doubtful that the fossil fuel would lower transport-related carbon dioxide emissions and may result in stranded assets.

Overall, the Netherlands, the UK and Spain come out on top of Transport & Environment’s ranking, although they are still some way off putting in place the policies needed to reduce transport emissions effectively.

“Right now, most EU governments’ transport climate plans will see them miss the EU’s binding 2030 emissions targets,” said Carlos Calvo Ambel, the group’s trends and analysis director. “That means they could be taken to court and fined or be forced to pay for emission reductions in other EU countries.”

He added: “The new Commission should send governments back to the drawing boards and tell them to come up with a plan that doesn’t ignore the children marching on our streets.”

10. EU Considers Measures To Reduce Emissions And Noise In Aviation

Technological innovation should be key to limiting CO2 emissions and noise from aircraft, according to a European Commission working paper on aviation and environmental protection. The EU executive also favors the development of supersonic jets, says the paper which was prepared ahead of the 40th Assembly of the International Civil Aviation Organization (ICAO), taking place between 24 September and 4 October 2019.

“Europe’s ambition is to develop technologies and procedures to achieve a 75% reduction in CO2 emissions per passenger kilometer to support the ATAG [Air Transport Action Group] target, and a 90% reduction in NOx emissions,” the paper states. The ATAG target involves reducing net aviation carbon emissions by half by 2050 compared to 2005.

Unless such technologies and procedures are developed, CO2 and NOx emissions in Europe are predicted to increase by at least 21% and 16% respectively by 2040, the Commission says, besides other harmful pollutants such as particulate matter and ground level ozone.

“There are also growing concerns about the impact of aviation on local air quality, the associated human health and welfare impacts and climate change”, the paper says.

In addition, perceived aircraft noise should be reduced by 65%, according to the paper. Significant constraints on future growth in air traffic and capacity should be envisaged, especially “if progress cannot be demonstrated in reducing significantly aircraft noise at source”.

The Commission emphasizes that the development of civil supersonic aircraft should “not undermine the considerable efforts made over many years to reduce aviation’s environmental impact in the field of noise and emissions”. Therefore, any supersonic airplane project should
comply with the most recent subsonic fleet standards, otherwise it could “lead to negative reactions from the public and potentially harm society's opinion of aviation in general”.

Several airlines already envisage future deployment of supersonic passenger jets. For instance, KLM in collaboration with TU Delft are planning to present a v-shaped sustainable supersonic model in October at Amsterdam Schiphol Airport.

Airline emissions continued to increase in 2018, according to EU Commission figures, amounting to 66.9 million tons of CO2, a 3.9% increase year-on-year. EU transport ministers are due soon to discuss aviation pricing and airspace capacity measures in the reduction of GHG emissions and congestion.

11. Moscovici: Commission ‘Ready To Work’ On Aviation Tax

The European Commission will propose measures to address the climate impact of aviation if member states can demonstrate that the political will exists to do so, according to EU economy and tax commissioner Pierre Moscovici.

“We all agree that reducing CO2 emissions requires efforts from all sectors and aviation is no exception,” said Moscovici. Aviation’s exemption from the Energy Tax Directive is “in stark contrast to the environmental objectives of the EU”, he conceded. “It also does not ensure a level playing field among different means of transport.

“I can assure you that the Commission is ready to work alongside all member states to explore all possibilities” for an aviation tax, he noted. Options include removing the aviation exemption from the Energy Tax Directive, providing guidelines for member states willing to sign bilateral agreements on intra-EU flights, or removing the aviation fuel exemption from EU agreements with third countries that have some form of domestic aviation tax, he said.

Taxation decisions must currently be made unanimously by member states in the Council of the EU, which has previously held back progress on an aviation tax. Moscovici conceded that a recent Commission communication that proposed switching to qualified majority voting was unlikely to be adopted. “But the important thing was to launch this discussion,” he said.

Swedish finance minister Magdalena Andersson strongly endorsed measures to place a tax on aviation fuel, which is currently untaxed because of how the 1944 Chicago Convention on aviation has been interpreted. Citing climate activist Greta Thunberg and Pope Francis, Andersson said the investments needed for a low-carbon future “won’t happen through voluntary contributions or market solutions. We cannot rely on good will or corporate social responsibility.”

Brune Poirson, France’s junior environment minister, said her government supported an initiative from the Dutch, Luxembourg and Belgian governments to “open a discussion on this topic”, but stopped short of advocating for a specific measure. “All relevant policy tools should be discussed,” she said, “including [a] carbon tax on aviation fuel, strengthening [the] EU emissions trading scheme by reducing free allocation for airlines, ticket taxes, plane taxes.”

Menno Snel, a Dutch junior finance minister, said his government aimed “to create a European aviation tax and carbon pricing system”. Citing a paper authored by his department, he argued that the Chicago Convention only applies to unused kerosene onboard a plane once it has landed, paving the way for an EU-wide tax.
“No new laws are needed to tax aviation fuel in Europe,” said Bill Hemmings, aviation director at Transport & Environment, citing a study for the Commission. “What has lacked so far is governments’ willingness to abolish fossil fuel subsidies for Europe’s fastest growing polluter.”

12. Netherlands, Sweden Urge EU Members to Back Aviation Fuel Tax

The Netherlands and Sweden are lobbying other European Union member states to adopt an aviation tax to reduce greenhouse gases.

Netherlands’ State Secretary for Finance Menno Snel said approving an EU-wide aviation fuel tax must be a priority in the next five years. Speaking at the conclusion of a June 20-21 Dutch government conference on aviation fuel taxes and carbon pricing, Snel also said divisions among EU member states will make it difficult to adopt an aviation tax.

“Considering the political reality, we must form a coalition of the willing to pursue aviation taxation in order to get as many countries to move forward on this,” Snel said at the conference held in The Hague.

Swedish Finance Minister Magdalena Andersson backed the Netherlands. She said at the conference that a multilateral treaty by like-minded countries was needed to neutralize the harmful subsidy that currently benefits the airline industry.

“There are enough core countries that would sign up for taxing aviation fuel and that would establish the example that aviation fuels taxes can work,” said Andersson. “Overall carbon taxation is the most effective instrument needed to reach a carbon neutral economy.”

Poland, Romania, and Hungary oppose an EU-wide aviation tax. On June 21 they rejected a European Commission plan that would commit the EU to a carbon-neutral economy by 2050.

“We believe that as a rule taxation should remain the competence of national governments,” Polish spokesman Edgar Szewcayk told Bloomberg Tax on June 21 at the conference. “The introduction of taxes in one type of transport may cause imbalances in others.”

The Airlines for Europe (A4E) trade association argues that adopting an EU aviation tax is unnecessary because the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) will start in 2020. According to A4E, 80 countries representing 77% of international aviation activity have voluntarily signed up for CORSIA and more than half of the 77 are European countries.

“Taxes weaken airlines’ ability to further invest and also hurt consumers by making it more expensive to fly,” Norwegian Air CEO Bjorn Kjos said in a June 18 statement distributed by A4E.

However, Ludger Schuknecht, the deputy secretary general for the OECD, said June 20 at the conference that CORSIA wasn’t sufficient to meet the Paris Agreement climate targets.

13. Report Sounds Alarm Over Air Pollution From Cruise Liners

Cruise ships emit far more harmful sulfur oxides (SOx) around Europe’s coast than its entire passenger car fleet combined, and about 15% of the total nitrogen oxide (NOx) emitted by all the cars in the EU, campaigners have warned.
Spain, Italy and Greece, closely followed by France and Norway, are most affected by cruise ships operating around their coastlines, while tourist hotspots Barcelona, Palma de Mallorca and Venice are the worst hit port cities, according to a recent report by Brussels-based Transport & Environment.

Describing giant cruise liners as floating cities running on “some of the dirtiest fuel possible”, T&E’s shipping policy officer Faig Abbasov warned that while local authorities had been tackling pollution from cars, the problem of shipping had been largely neglected.

The world’s largest luxury cruise operator, Carnival Corporation, on its own emitted nearly ten times as much SOx from Europe’s coastal waters coast than all 260 million cars on dry land, the group estimated.

“Cities are rightly banning dirty diesel cars but they’re giving a free pass to cruise companies that spew out toxic fumes that do immeasurable harm both to those on board and on nearby shores,” Abbasov said.

Among several policy recommendations in the report, T&E calls for a zero-emissions berth standard in all European ports, and extra stringent pollution standards for cruise ships, as they typically operate closer to the coast then transport shipping.

An EU directive limiting the sulfur content of marine fuel has already seen pollution levels drop by over a half in in environmentally sensitive ‘emissions control areas’ (ECAs), according to a recent European Commission report. T&E recommends extending these protected areas, currently in place in the North and Baltic Seas, to the rest of EU waters, and that the sulfur content limit for marine fuel should be tightened to10 parts per million, in line with road transport.

At the global level, air pollution from shipping is expected to drop after 2020, when an International Maritime Organization cap on the sulfur content of shipping fuel takes effect.

14. European Shipping Reports 150m Tons Of CO2 Emissions In 2018

The total carbon dioxide emissions from large ships transporting goods or passengers within, to or from the European Economic Area came to more than 150 million tons in 2018, according to a new database.

The Thetis system, set up by the European Maritime Safety Agency, has published for the first time self-reported data from nearly 11,000 ships on their total CO2 emissions, fuel consumption, vessel type and hours at sea, among other information.

Total CO2 emissions exceeded 152 million tons last year, with the top three vessel types – roll-on/roll-off passenger ships (known as ROPAX), container ships and bulk carriers – accounting for almost 60% of emissions, according to analysis carried out by ENDS. Oil tankers were the fourth largest source of emissions, responsible for almost 17 million tons of CO2.

Data from the European Environment Agency put the total emissions of international shipping at 135 million tons in 2015, similar to emissions from international aviation.

Greenhouse gas output per nautical mile varied hugely by vessel type, with the median of the reported average emission rates for LNG carriers coming in at 897kg of CO2 per nautical mile, compared with just 192kg for the general cargo ships.
The information was published as required by a 2015 regulation on the monitoring, reporting and verification of CO2 emissions from maritime transport.

In a statement the European Commission said it would “carefully analyze” the emissions data and publish a report before the end of 2019 “to inform the public and allow for an assessment of the CO2 emissions and the energy efficiency of maritime transport”.

The sector has come under increased scrutiny in recent months, with the International Maritime Organization (IMO) making slow progress on measures to cut emissions.

The Commission signaled last year that it was prepared to go ahead with unilateral measures to control greenhouse gas emissions from shipping unless the IMO can reach an international agreement.

15. Barcelona To Receive 100+ New Electric Buses, Replacing Diesel Buses

Barcelona will soon be the latest city to add a large number of electric buses to its fleet, replacing aging diesel buses in the process. The European Investment Bank (EIB) is granting a EUR 73.5 million loan ($81.8 million) to the city’s public transport operator, Transports Metropolitans de Barcelona (TMB). TMB will be replacing diesel and first-generation compressed natural gas buses with more than 250 new buses.

Not all of the buses will be electric, however. Of the 254 “new, safer, less polluting and more modern vehicles” to be put into service, 116 will be electric. The remainder of the order will be made up of hybrid and new compressed natural gas buses. Hybrids will replace 20 diesel double-decker buses.

The new buses will come in three waves: 105 buses in late 2019, 75 more in 2020, and the final 74 buses should arrive by 2021. The EIB notes the new buses will help reduce pollution in the city as the service continues to become more popular:

This will enable TMB to accelerate the transition to a zero-emission bus network and to improve service quality and reliability. In addition to improving air quality, the goal is to increase demand for this service to cut private transport use. Barcelona’s public city buses have seen a 17% increase in use over the last six years – transporting 203 million people in 2018 – a figure that is still growing.

Despite the upcoming addition of hybrids and CNG buses to the fleet, TMB Chief Executive Officer Enric Cañas said the renew of Barcelona’s fleet is “very much focused on electrification,” continuing: “The 116 fully electric buses to be introduced by 2021 will enable us to convert entire lines on our main network to zero emissions. Electric transport involves higher initial investment costs in terms of both vehicles and infrastructure, meaning that appropriate financing from public transport authorities and financial institutions is vital.”

Considering this focus, it’s possible that TMB sees the hybrid and CNG buses as a sort of stopgap measure while the electric infrastructure is established.

In neighboring France, Paris announced last month it would be replacing diesel buses with 800 new electric buses.
16. Member States Must ‘Step Up’ Investment In Clean Bus Infrastructure

A transition to zero-emission buses is being held back by a lack of charging infrastructure, risking the possibility that the EU will miss its targets under the Clean Vehicles Directive, transport industry groups have warned.

In a joint statement, auto industry group ACEA and the International Association of Public Transport (TIUP) have urged member states to increase investments in the charging and refueling infrastructure needed for zero-emissions buses.

MEPs and member states agreed in February to set mandatory public procurement targets for electric and other zero-emission buses as part of changes to the Clean Vehicles Directive, which came into law last month.

However, without further investment in infrastructure “these targets simply cannot be met”, the trade groups warn.

“ACEA and UITP are therefore urging member states to scale up support measures for alternative fuel infrastructure for buses,” they state, as well as revising the 2014 Alternative Fuel Infrastructure Directive to encourage the uptake of zero-emission buses.

“There is no doubt that climate change is a major challenge which also requires additional efforts to cut CO2 emissions from the transport sector,” said ACEA’s secretary general, Erik Jonnaert. “However, the lack of charging and refueling infrastructure is a major barrier to introducing new bus technologies to the market.”

In June, green group Transport & Environment had warned that most member states had failed to include adequate details in their draft national energy and climate plans on how they would reduce greenhouse gas emissions in the transport sector.

Most draft plans remain far too vague on promoting public transport and active travel, or on reducing emissions from trucks, vans and buses, the group said.

Meanwhile, Eurelectric, which represents the European electricity industry in Brussels, highlighted that 10 draft NECPs had no plan for electrifying the transport sector, with few containing enough detail on building renewable power capacity at the scale needed.

17. ‘Unacceptable’ That Majority Of Dirty Diesels Still On EU Roads

Campaigners say it’s ‘unacceptable’ that just 25% of the most polluting diesel cars identified during the Dieselgate emissions scandal have been recalled across the EU since 2015. Transport & Environment (T&E) analyzed EU data on car recalls from every member state and found that it will take another two years for the 43 million affected cars to be recalled at the current pace.

They say progress is not only slow but also very unequal across countries and manufacturers, with consumers from Eastern Europe having particularly low rates of recalls. They say this is because diesel cars are being shipped abroad from Germany, France and Spain because of bans placed on diesel cars in major cities.

They also highlight that currently, cars can be sold across the EU single market once they have been type-approved in only one member state, but there is no European system to ensure the
uniform recall of cars. This means rules that allow EU-wide recalls will only apply to new cars sold as of September 2020 – so Europe is left with the fleet of polluting diesel cars resulting from Dieselgate.

Florent Grelier, clean vehicles engineer at T&E, said: ‘The current snail’s pace to clean up diesel cars across Europe is unacceptable. The industry has had four years since the diesel scandal broke but has failed to deliver even on its own commitments to fix manipulated cars. ‘It’s time for governments to get tough and order mandatory recalls across the EU. This does not require any new laws but just political will.’

In the UK 75% of the problematic Volkswagen EA189 have been taken off the roads. Germany has the best figures, recalling 99% of theirs, with Romania recalling just 37%.

T & E says the continuing scandal is undermining improvements in air quality but also consumer trust. They have called on carmakers to be quicker implementing voluntary and mandatory recalls, national governments to implement recalls issued by other member states, and for the EU Commission to create an independent EU testing authority.

18. Truck Makers Could Fund Low-Carbon Fuel Technology, Refiners Say

Instead of facing fines for failing to meet EU requirements to reduce the CO2 output of new trucks, manufacturers should have the option of gaining credits for supporting the development of low-carbon liquid fuels, European oil refiners have suggested in a policy proposal.

Current rules reward manufacturers for engine efficiency improvements and improved aerodynamic performance, and give credit for increasing production of electric models, said consultant Chris Malins, who helped develop the proposal for the refiners’ trade association FuelsEurope. “What there is not at the moment is any provision to take advantage of fuels with a lower 'well-to-wheel' carbon intensity,” Malins said.

Under a regulation adopted last year, manufacturers are required to reduce average CO2 emissions from new trucks and other heavy duty vehicles 15% by 2025, and 30% by 2030, when they will face a penalty of €6,800 for each excess gCO2/t-km (a measure based on greenhouse gas emitted when shifting a ton of freight one kilometer).

FuelsEurope argues that manufacturers will opt to pay the fine if the cost of redesigning their vehicles looks set to exceed the potential penalty and should instead be able to strike deals with refiners or other firms looking to develop lower-carbon liquid fuels.

These can be biofuels or produced, for example from natural gas using carbon capture technology, or zero-carbon synthetic fuels produced using renewable electricity.

However, the European Parliament has already rejected during negotiations on Europe’s first ever emissions standards for heavy duty vehicles the idea of introducing a 'carbon correction factor' that would credit manufacturers for the use of lower-carbon fuels. The EU executive had warned this could lead to ‘double counting’ of emissions reductions under separate pieces of EU legislation.

FuelsEurope says it has eliminated this problem in its new proposal. But this was not the only objection voiced at the trade association’s annual convention. The director of the campaign group
Transport & Environment, William Todts, said the proposal would reduce the pressure on manufacturers to electrify freight transport.

Todts accepted FuelsEurope's argument that liquid fuels offer the only viable route to decarbonizing the aviation sector, for which he said zero-carbon ‘e-fuels’ were inevitable but questioned if that was a role for truck manufacturers. "What you could also do is ask the fuels suppliers to develop it, or ask the aviation sector, which is an under-taxed and under-regulated sector, to make its contribution," Todts said.

NORTH AMERICA

19. Latest Developments in Trump Vehicle GHG Rollback

EPA, California Engage In Sharp War Of Words

Top EPA and California officials are engaged in an aggressive war of words over who is responsible for the breakdown of talks over vehicle fuel economy and greenhouse gas rules and the Trump administration's plan to sharply roll them back.

The pointed accusations come as the House Energy & Commerce Committee held a June 20 oversight hearing regarding the Trump administration rollback proposal, which is being jointly crafted by EPA and the National Highway Traffic Safety Administration (NHTSA).

In written testimony for the hearing, California Air Resources Board (CARB) Chairwoman Mary Nichols offers a variety of searing criticisms of the measure, underscoring her state's long-standing opposition to the rollback. The proposal “dispenses with [50] years of clean air progress made by the states and the federal government. It will cost Americans millions more in fuel costs, kill jobs upon which Americans depend, pump smog pollution into the air at special risk to children and the elderly, undermine the auto industry, and worsen the climate crisis.”

She also charges that professional staff at EPA and California “were cut out of this proposal's development,” and that the “oil industry drove this action, mounting an ongoing disinformation campaign and seeking to co-opt the former oil and coal industry lobbyists and lawyers who now work in leadership at the Agency.”

But in a remarkable June 20 letter to Republican leaders on the House energy committee, EPA chief Andrew Wheeler charges that Nichols is giving “false” and “irresponsible” testimony to lawmakers, saying that she did not “operate as a good faith actor in this rulemaking.”

Wheeler spends much of his letter rebutting Nichols’ claim that she offered a “counterproposal” to the Trump plan -- and thus should not be held accountable for the breakdown in efforts to reach a compromise. The EPA chief says Nichols “finally” offered a counterproposal weeks later than promised, and that the plan had not been approved by outgoing Gov. Jerry Brown (D), incoming Gov. Gavin Newsom (D), state Attorney General Xavier Becerra (D) or other members of CARB.

In his letter to Reps. Cathy McMorris Rodgers (R-WA) and John Shimkus (R-IL), Wheeler says he hopes lawmakers “will ask [Nichols] about California’s lack of effort.” Further, Wheeler also pushes back on other statements in Nichols’ testimony, writing that her claims of EPA staff being cut out of the rule's development are “false.”
He also writes that Nichols’ accusations regarding the oil sector’s influence -- based largely on a New York Times investigation of a “stealth” campaign to build support for the plan -- amounts to “irresponsible testimony about conspiracy theories,” and that such claims are “beneath the responsibilities of the substantial position she holds.”

In her oral testimony at the hearing, Nichols said Wheeler’s letter was “rather shocking” and that she “stand[s] by every single word” in a key section of her written testimony that says the state has been open to new flexibility under the standards and has tried to negotiate with the White House, but that “each time, the Trump administration has been unwilling to find a way that works.”

“California is not here because we are seeking to defy the federal government,” she said. “We are in the business of setting emissions standards” under longstanding Clean Air Act authority allowing the state to enforce tougher vehicle standards than the federal government.

EPA staff distributed Wheeler’s letter during the June 20 hearing, though the letter drew a rebuke from Democrats such as Rep. Debbie Dingell (D-MI), who has called on the White House to back off on its rollback proposal and reach an accord on rule changes with California and her home state automakers. “The administration needs to respect California's role in the process,” she said, predicting “years of litigation, uncertainty for the auto industry and employees across the country.”

Dingell added that she is “really not interested in a pissing contest” between California and the Trump administration, and that she takes “offense” to Wheeler’s letter.

After pressing EPA air chief Bill Wehrum to commit to resume negotiations with the Golden State, Wehrum responded that “we will keep doing what the President said,” referencing instructions to try to reach a deal but to ultimately issue a rule. “So, I have to call the president,” Dingell replied.

**Former EPA Engineer on Wheeler’s Claims: ‘This is a Lie’ Nichols is Right**

EPA chief Andrew Wheeler’s claims that agency career staff weren’t shut out of developing the administration’s fuel economy standards don’t pass the laugh test, a former senior EPA engineer says. “This is a lie, and I know because I was there,” said Jeff Alson, a former senior engineer in the Environmental Protection Agency’s vehicles lab in Ann Arbor, Mich.

Alson, a four-decade veteran of the EPA, worked for much of his career on the fuel economy standards before retiring in April 2018. He was responding to a heated exchange between Wheeler and California Air Resources Board head Mary Nichols.

Alson’s comments also pinpoint what some suggest could be a vulnerability for the EPA as it moves to freeze or sharply weaken the Obama-era fuel economy limits: the fact that EPA political appointees appeared to give little, if any, weight to the technical analysis and comments of career agency experts.

The federal agencies justify the freeze in large part by arguing it would be safer, reducing fatalities on the road by keeping the cost of new vehicles low. That safety analysis has come under fire from environmental groups, some automakers, and well-known economists—many of whose work the agencies cite in their proposal.

But committee Democrats and most of the hearing’s witnesses offered significant pushback to those claims, highlighting critiques of the rule from outside experts, state air officials and even EPA’s career staff.
In their testimony, Wehrum and King largely reiterated administration claims that the proposed rollback is necessary to consider numerous factors including a changed automobile market since the current standards went final in 2012, and that a final rule resembling the proposed freeze in standards through model year 2026 could save thousands of lives annually.

King cited an "affordability crisis" in the new car market, stating that consumers are more likely to upgrade to newer, cleaner, safer cars if costly regulations don’t raise the price beyond their willingness to pay. Wehrum added that fuel economy standards have “contributed to those cost” of new vehicles.

The administration’s cost estimates and safety claims, while hotly contested, are important in that they help support its arguments downplaying the rollback’s environmental effects, including increases in both GHGs and criteria pollutants.

In this vein, King said the rollback would have “almost no impact on climate change” because cheaper vehicles under weaker standards would help get families “into newer, cleaner cars.”

Wehrum similarly responded to a question on the plan’s potential air quality impacts -- from Rep. Lisa Blunt Rochester (D-DE) -- by citing administration analysis downplaying the issue. “Our projection says some pollutants may go down, a couple of pollutants will go up,” he said. When you put it together, “it is kind of a wash.”

Wehrum also cast the proposal as a necessary balancing act between emissions reductions and cutting highway deaths. “We are not going to put blinders on and seek additional emission reduction to the exclusion of what our analysis predicts to be substantial impacts on highway safety,” he said.

But Wehrum and King’s claims clash with those from many outside experts -- including some in the auto sector itself -- questioning the administration’s safety, cost and emissions claims.

One of many examples is a December article in Science from nearly a dozen economists challenging both the Trump administration’s cost estimates for vehicle technology and an apparent flaw in NHTSA modeling that generates higher vehicle miles driven under the current standards -- and therefore higher traffic deaths. The article said the safety modeling is at odds with “basic economic theory.”

In addition, numerous press reports -- as well as documents in the rulemaking docket -- indicate EPA career staff have raised similar objections to the underlying analysis for the plan in part because it relies on NHTSA’s modeling. The Obama-era rules were analyzed both by NHTSA and EPA models.

EPA technical staff at one point in 2018 sought to have the agency’s transportation office’s name removed from the plan’s draft regulatory impact analysis.

Several Democrats, including Energy & Commerce consumer protection panel Chairwoman Jan Schakowsky (D-IL), pressed Wehrum and King about what the agencies are doing to address EPA career staff concerns over the rule’s apparently faulty assumptions.

Alson, in his June 20 written statement said that analysis was “100% controlled by NHTSA with 0% contribution by EPA technical staff.” He pointed to a lengthy memo authored by staff in the
EPA’s Office of Transportation and Air Quality that warned the safety numbers were “clearly wrong.”

“I can personally testify that there was not a single technical working meeting between EPA and NHTSA technical staff prior to” the administration’s release of its proposal, Alson said.

“While there were a few ‘check the box’ staff meetings in early 2018, NHTSA did not consider any of the technical input provided by EPA,” he added.

In a response to Alson’s criticism, the EPA said Wheeler’s letter “speaks for itself.” “Career, professional staff within the Office of Air and Radiation were involved in the development of the proposal and continue to be involved in the final stages as we work with NHTSA to finalize this rule,” EPA spokesman Michael Abboud said.

And EPA air chief Bill Wehrum, testifying before the committee, downplayed the memo from EPA career staff. “These are really complicated issues,” Wehrum said in response to questions from Rep. Janice D. Schakowsky (D-Ill.) on whether he agreed with EPA career staff. “It is not surprising at all that on this range of complex issues that even among experts there are disagreements.”

But Wehrum, though calling the vehicle office staff “true experts,” also didn’t directly answer questions from Rep. Paul Tonko (D-N.Y.) about whether and how involved they were in the rulemaking process.

Democrats didn’t buy Wehrum’s responses. “The information that is fed in” to the rulemaking process “has to be good if the information coming out is to be good,” Schakowsky said. “You’ve heard the old [phrase]: garbage in, garbage out.”

**Trump Administration Readying Final Review**

Trump administration officials defended their controversial proposal to freeze fuel efficiency requirements at 2020 levels at the June 20 congressional hearing and said the proposal would be submitted to the White House for final review in the coming weeks.

The administration has rebuffed requests from automakers and some lawmakers to make a last-ditch effort to reach a deal with California to extend national standards after it ended talks in February. The administration plans in the coming months to finalize a dramatic rewrite of fuel efficiency standards through 2026 that would also strip California, the most populous U.S. state, which wants stricter rules to fight climate change, of the right to set its own, tougher emissions rules.

The final regulation potentially faces a multi-year legal battle that could leave automakers in limbo about future emissions and fuel efficiency requirements and ultimately decrease the number of U.S. electric vehicles offered by automakers.

At a joint five-hour hearing of two House of Representatives Energy and Commerce subcommittees, Democrats cast the administration plan as a blow against efforts to combat climate change and a boon for oil companies. Republicans said it would reduce vehicle prices and rein in California.
Earlier, 17 major automakers including General Motors Co, Volkswagen AG and Toyota Motor Corp urged the White House to resume talks with California to avoid a lengthy legal battle. Automakers warn that the lack of a deal could lead to "an extended period of litigation and instability." The carmakers urged a compromise "midway" between the Obama-era standards that require annual decreases of about 5% in emissions and the Trump administration’s proposal.

EPA Assistant Administrator Bill Wehrum said the agency was moving forward to finalize the rules "as soon as possible" after it had engaged in talks with California for about a year. Wehrum told reporters after the proceeding that it would be “weeks” before a draft final rule goes to the White House for inter-agency review, a timeline that suggests the rule might not be issued until August or even later.

Trump administration officials argued its plan -- which it says will eventually boost U.S. oil consumption by 500,000 barrels of oil daily -- will save lives because it will reduce the forecasted cost of new vehicles and prod more people to sell older, less safe models. Environmentalists and others disagree.

Representative Frank Pallone, chairman of the Energy and Commerce Committee, called the Obama standards "our single most important action taken to combat climate change." "So, naturally, the Trump administration is trying to gut those standards as part of its reckless anti-climate agenda," he said.

Transportation accounts for 30% of U.S. greenhouse emissions, with light cars and trucks accounting for 60% of that figure.

Republicans cast the issue as a divide between rural areas that use more trucks and urban areas where people are more likely to buy electric vehicles. "We like big things. We like big trucks. We like big engines," said Representative John Shimkus, an Illinois Republican whose district covers a heavily rural swath of the eastern part of the state.

California, Autos Mull Steps To Manage Aftermath Of GHG Rule Rollback

California’s top air regulator says she is meeting with automakers about how the state would manage potential regulatory confusion if the Trump administration finalizes its plan to scrap existing vehicle greenhouse gas and fuel economy standards, resulting in a protracted legal battle.

Such a “plan b” has not been fully developed but is premised on the expectation that the Golden State and the White House do not reach an accord on changes to the current, Obama-era rules. That would lead to a formal regulatory break in which automaker compliance with federal rules no longer satisfies California’s standards, though EPA and the Transportation Department (DOT) will also attempt to preempt the state’s regulatory authority.

“Individual auto companies have been coming in lately on the assumption that the Trump administration is not going to move off of their proposal” to freeze the current program, said California Air Resources Board (CARB) Chairwoman Mary Nichols, in remarks to reporters following her June 20 testimony before a pair of House Energy & Commerce subcommittees on the Trump administration’s rollback proposal.

“People are thinking about plan b, what happens when California goes off on its own,” Nichols added.
EPA and DOT’s final rollback rule is almost certain to include provisions rescinding California’s current waiver of federal preemption. That means that, at least theoretically, automakers would not have to comply with the state’s GHG standards, which are aligned with the Obama-era requirements.

However, that offers industry little assurance in practice, with California and its allies pledging a vigorous defense of both the state’s regulatory authority and of the current vehicle program. In the event that the agencies’ preemption provisions are paused or scrapped in court, the auto industry would be required to comply with two sets of standards -- one for California and its allied states representing about a third of the new auto market, and another for the remainder of the country.

The fact that CARB has been talking with auto companies to avert -- or manage the aftermath of -- a full-scale war between the Trump administration and backers of the current vehicle rules is not entirely new, though there have been few details on possible outcomes of those talks.

But Nichols shared additional clarity on how California and industry might approach such a federal-state split, at least initially. While there is “no such thing” as a completed plan b -- yet -- Nichols cited interest in reducing the level of uncertainty if the state and the Trump administration are locked in protracted litigation over the final rollback rule.

Specifically, there is discussion of “what could cause [California] to be in a situation where we wouldn’t be attempting to bring enforcement action against companies” once the Trump administration’s vehicle GHG rollback goes final, she said.

That likely refers to the fact that automaker compliance with weakened federal rules would no longer be deemed adequate to comply with California’s requirements -- which have been copied by a dozen other states under the Clean Air Act -- under a rule change that CARB already approved but which has been held at the state’s office of administrative review amid the theoretical possibility that the state could reach a negotiated settlement with the Trump administration.

With respect to the regulatory picture amid a possible federal-state split over the standards, Nichols downplayed the idea that automakers would immediately be targeted for noncompliance of CARB requirements, given that compliance is based on emissions averaging across multiple years. “It is not like anybody is going to be getting citations the day after a [new] federal rule goes into effect,” she said. “At the same time, [auto companies] need to make plans and they work hard to be in compliance. . . Those are the kind of enforcement issues we have been talking about.”

During her oral testimony and remarks to reporters, Nichols reiterated that the state remains open to a possible resumption of talks with federal officials.

Both Democrats and Republicans at the hearing expressed support for finding a way to restart the talks, though there is little public sign that will happen and there is pressure on both sides to avoid blame for the collapse of negotiations. “We eventually need to compromise, and that means give and take on both sides,” said House Energy and Commerce environment panel ranking member John Shimkus (R-IL), during testimony by Nichols and other non-federal witnesses. He also expressed a desire for lawmakers to help sort out the disagreement.

“I would appeal to you, and I would appeal to the EPA. If there is any way we can offer assistance in getting people into a room, I think we would be willing . . . to do that,” he said.
In response, Nichols was careful not to rule out fresh negotiations but maintained that the Trump administration has essentially not been serious from the start. “In those discussions, it was made very clear to us from day one that this administration was determined to take away California’s waiver for the current standards we have in effect as well as for any future standards,” she said.

“And then we were told it was up to us to come up with a counterproposal that the administration would accept, and if they somehow found it acceptable, they might possibly -- and this was really only hinted at -- consider not moving right away to take away the waiver.”

Nichols concluded: “I ask you whether you or any state official, if you were a state official, would have considered that to be a starting point for negotiations when you are already being told that there is a determination to treat you as illegitimate.”

She similarly told reporters that any movement regarding negotiations is up to the Trump administration, in part because the White House itself declared that it was breaking off talks several weeks ago. She also suggested the outcome might depend on whether President Donald Trump himself issues a fresh directive to his agency officials to resume negotiations.

“If the president tells them to, they will, but otherwise I don’t think we are going to be getting an invitation anytime soon,” she said.

The CARB chief also reiterated the state’s “two bottom lines” in any negotiation -- the administration backing away from both its current position to require no new improvement in fuel economy and its preemption plan -- as well as possible regulatory flexibilities that it could support.

She added that the state’s prior technical review actually shows the current rules could be strengthened but said she doesn’t often press this point and “that was not where we were trying to go” in prior talks with Trump officials.

“We would like to see more flexibilities” in terms of regulatory credits for off-cycle emissions, that the industry would not be held responsible for “upstream emissions” from power plants, and “continuing credits” for electric vehicles.

Nichols believes automakers would respond positively to “any indication the administration is open to” incentives to encourage electric vehicles. “To a company, every one of [the automakers] have all said they are committed to developing electric vehicles.”

**Laggard Fiat Leans Toward Trump in Industry Anxious Over Emissions Rules**

When a group of 17 of the world’s largest automakers sent a letter to President Donald Trump on June 6 asking him to compromise with California on vehicle-emission standards, one company was notably absent from the list of signatories: Fiat Chrysler Automobiles NV. That holdout stance is not atypical for the automaker, known for its Jeep SUVs, beefy pickup trucks and Italian sports cars. Most automakers have called for tapping the brakes by adjusting national fuel-economy and emissions standards in light of low gasoline prices and soaring SUV sales. But Fiat Chrysler’s public comments hew closer to the Trump administration’s reverse shift on Obama-era regulations.

General Motors Co. suggested a national mandate for electric vehicles in 2021 in its written comments to regulators. Honda Motor Co. called for “strong 2025 targets” and said it did not
support a Trump administration proposal to freeze the standards. Ford Motor Co.’s top executives said publicly they “support increasing clean-car standards through 2025 and are not asking for a rollback.”

In its written comments submitted to regulators last year, Fiat Chrysler said it agrees with one of the Trump administration’s central arguments: Stricter fuel-efficiency mandates drive up new vehicle prices, keeping older, dirtier, and less-safe cars on the road longer. It said this could undermine the very air quality and safety benefits the Environmental Protection Agency and National Highway Traffic Safety Administration rules aim to deliver.

“Our support for one national program and the mid-term evaluation remains unchanged,” Fiat Chrysler said in an emailed statement last week after its peers’ letter became public. “It was made clear when we were one of just two automakers to testify last September at hearings held by the EPA and NHTSA.”

When the Trump administration proposed stripping California of its authority to limit tailpipe greenhouse-gas emissions last August, Fiat Chrysler made one of the industry’s strongest public endorsements of the federal government’s right to do so. “It remains our hope that conflicts over preemption will be avoided by an agreement,” the automaker wrote in comments submitted to the government last October. “However, in the absence of such an agreement, FCA agrees that the law gives the federal government the authority to preempt state standards that are directly related to fuel economy.”

Fiat Chrysler was among the first car companies to abandon sedans and, according to market research firm Edmunds, its model lineup has the lowest average fuel economy among the six biggest automakers. But almost every major manufacturer is boosting production of higher-emission SUVs and trucks for the U.S. market.

Under Chief Executive Officer Mike Manley, who took over last July, Fiat Chrysler has ramped up plans to electrify its lineup, in part to stay competitive in China and Europe where emissions standards are tougher. The automaker still stands to benefit the most from Trump’s proposed freeze, according to Alan Baum, an independent auto analyst in West Bloomfield, Michigan.

The Italian-American company has been a laggard even by industry standards. It ranked last among 13 car companies for both fuel economy and carbon emissions in the EPA’s evaluation of 2017 model-year sales. Its late CEO Sergio Marchionne publicly griped about having to sell a
money-losing battery electric vehicle in California to meet that state’s more stringent emissions standards.

The company has pointed out that demand for low-emissions models remains muted in much of the country, with hybrid and plug-in electric vehicles accounting for just 1.5% of U.S. vehicle sales through July of last year, according to IHS estimates. “The final rule must be based on the market realities of today,” Fiat Chrysler said in its written testimony on emissions-policy revisions.

**High Court’s Census Decision Could Bolster Suits Over Trump EPA Rollbacks**

The Supreme Court’s decision faulting the Commerce Department for adding a citizenship question to the 2020 census based on a “contrived” post hoc pretext could bolster suits targeting some of the Trump EPA’s rule rollbacks, such as a likely case over vehicle emission standards, where challengers say EPA has ignored or misrepresented the record.

Chief Justice John Roberts’ June 27 ruling in Department of Commerce, et al., v. New York, et al., held that evidence shows the department decided to ask respondents their citizenship status early in the Trump administration and only came up with the justification that doing so would aid enforcement of the Voting Rights Act (VRA) after the fact.

“Unlike a typical case in which an agency may have both stated and unstated reasons for a decision, here the VRA enforcement rationale -- the sole stated reason -- seems to have been contrived,” Roberts writes.

Based on that holding, the court ultimately voted 5-4 to remand the issue back to the department, with Roberts joined by the four liberal justices on the final result.

“The reasoned explanation requirement of administrative law, after all, is meant to ensure that agencies offer genuine justifications for important decisions, reasons that can be scrutinized by courts and the interested public. Accepting contrived reasons would defeat the purpose of the enterprise. If judicial review is to be more than an empty ritual, it must demand something better than the explanation offered for the action taken in this case,” Roberts writes.

While the direct impact of the ruling is limited to the census, court watchers have seen the outcome of the case as a bellwether for the high court’s review of Trump administration actions, and whether the justices will look critically at the relationship between final rules and their factual or scientific underpinnings.

How lower courts will interpret and apply Roberts’ opinion is likely to remain an open question for some time. But litigants can be expected to invoke the decision in a host of cases where environmentalists, Democratic states and others say EPA is regulating based on its political officials’ policy preferences and not the factual record that should support agency actions.

Those cases include expected challenges to EPA plans to roll back vehicle greenhouse gas standards, as well as other policy decisions, such as a recent rule allowing year-round sales of 15 percent ethanol (E15).

Out of the rulemaking cases that hinge on EPA’s treatment of a factual record, the most prominent may be the joint EPA-Department of Transportation proposal to mostly freeze Obama-era vehicle emission standards. Opponents of the effort have argued that the agencies’ plan is at odds with
the advice of outside experts, state air officials and even EPA’s career staff, and that their claimed benefits rest on faulty scientific or economic reasoning.

And while the vehicle rule itself is still in the proposal stage states, environmentalists and some auto industry groups are already suing over the agencies' 2017 determination to reopen the standards after the Obama administration enacted a final rule retaining them through 2025.

That suit, known as California, et al., v. EPA, et al., is headed for oral argument on Sept. 6 after the U.S. Court of Appeals for the District of Columbia Circuit rejected EPA’s claim that the determination is not a reviewable “final action,” and could turn on whether the agencies made their decision based on fact-finding.

Democratic states have argued in briefs that EPA’s original proposal “devotes only 11 pages to its assessment,” and “fails to provide any real assessment” of the factors that purportedly support the move.

Other actions that could tee up similar issues include EPA’s new waiver allowing year-round sales of 15 percent ethanol fuel, which it crafted under an overt directive from the president, and the State Department’s approval of the contentious Keystone tar sands pipeline, where appellate judges previously faulted officials for failing to provide “a reasoned analysis” of their decision making.

**Canada & California Agree to Support Clean Transportation**

The governments of Canada and California announced a formal agreement to work together to advance clean transportation. The Memorandum of Understanding outlines several areas where the two jurisdictions will collaborate to decarbonize vehicles, engines, and fuels. The MOU outlines their intention to “collaborate on the development of our respective greenhouse gas regulations for light-duty vehicles…share information and best practices to accelerate deployment of zero-emission vehicles…and low-carbon clean fuel standards.”

Reducing transport pollution will help Canadians save money, clean its air, and help fight climate change. The auto sector is changing quickly, with electric and autonomous vehicles and other advanced technologies creating huge new opportunities for automakers, parts manufacturers, software developers, and Canada’s mining sector. As demand for cleaner and more efficient vehicles grows, investing in innovation is essential to ensure that Canadian automakers remain competitive and that it continues attracting the jobs of the future.

With the fifth-largest economy in the world, California remains a global leader in harnessing clean solutions to spark economic growth and create new, middle-class jobs. Canada likewise remains committed to ambitious climate action, and is taking effective, concrete measures to reduce pollution throughout its economy. Cleaner vehicles and fuels are key to meeting Canada’s climate goals.

The agreement commits Canada and California to work together on their respective regulations to cut down on greenhouse gas pollution from vehicles like cars, pickup trucks and SUVs. Effective regulations, like those currently in effect in California and Canada, help ensure that people can drive fuel-efficient cars that cut down on pollution and save money in fuel costs.

The agreement also commits Canada and California to work together to promote the uptake and opportunity of cleaner vehicles. This will ensure Canadians have access to a wide variety of
vehicles as we work toward having all light-duty vehicles sold here being 100% zero-emission vehicles by 2040. To help Canada get there, Canada’s federal budget offers Canadians a rebate of up to $5,000 for qualifying zero-emission vehicles and other tax incentives for businesses that want to upgrade to zero-emission fleets. In California, automakers are required to ensure that zero-emission vehicles make up a growing proportion of their sales, and the state aims to have five million zero-emission vehicles on the road by 2030.

Canada and California will also share best practices and technical information about regulating cleaner fuels, building on California’s success with its pioneering Low-Carbon Fuel Standard. Canada is developing a Clean Fuel Standard that will cut emissions by 30 million tons in 2030—equivalent to taking 7 million cars off the road.

Pollution knows no borders. By working together with international partners and industry to find practical, affordable, and cleaner ways of doing things, the Government of Canada is fighting climate change, supporting good middle-class jobs, keeping life affordable and building the clean economy of the future.

In addition, the MOU details concrete actions that Environment and Climate Change Canada (ECCC) and the California Air Resources Board (CARB) will take to strengthen their partnership, including capacity building, joint research projects, and the creation of an annual working group that discusses opportunities to partner on the development and implementation of policies and programs.

With the announcement, Canada is signaling that it may not follow the United States down the road of rolling back vehicle standards. Canada’s current cost-effective vehicle efficiency standards provide significant benefits to consumers.

At the press conference Catherine McKenna, Canada’s Minister of Environment and Climate Change, said that regulatory alignment between Canada and California “means a bigger market for clean cars in North America.”

The combined vehicle sales in Canada, California, and the 13 states that follow California’s vehicle regulations in lieu of those at the level federal is about 50% of the total U.S.-Canada new car market, rising to half the market with the expected addition of Colorado. In the wake of the U.S. proposed standards rollback, Canada’s leadership on climate policy is seen to be needed.

20. In Surprise, EPA Announces Departure Of Air Policy Chief Bill Wehrum

In an unexpected move, EPA has announced that air chief Bill Wehrum is departing at the end of this month, potentially raising questions about the progress of major air and climate rollbacks that EPA has been advancing under his watch.

The agency announced that Principal Deputy Assistant Administrator Anne Idsal will assume the responsibility of acting assistant administrator.

“While I have known of Bill’s desire to leave at the end of this month for quite some time, the date has still come too soon,” EPA Administrator Andrew Wheeler said in a June 26 press release. The release applauds “Bill and his team for finalizing the Affordable Clean Energy rule last week and for the tremendous progress he has made in so many other regulatory initiatives.”
The Trump administration has been pursuing a range of deregulatory initiatives -- including many measures to roll back Obama-era air and climate rules -- but many of them remain unfinished, raising questions about how Wehrum’s departure will affect those rollbacks’ progress.

His forthcoming exit comes after various ethics allegations swirled around him for months, centered on his contact with industry clients for his former law firm, Hunton Andrews Kurth. Critics have alleged that Wehrum failed to distance himself from the now-disbanding Utility Air Regulatory Group (UARG) and other clients.

House Democrats have been investigating close ties between Wehrum and the Hunton-based UARG -- an inquiry that likely spurred the group to begin shutting down last month.

Just prior to that announcement, Senate Democrats called for an EPA inspector general inquiry into Wehrum after written comments from Hunton were adopted verbatim in an agency memo easing utility air permit requirements.

Recently, Hunton began speaking out in defense of its work after weeks of public silence, seeking to highlight evidence that both the firm and Wehrum acted in accordance with federal ethics procedures.

Despite his forthcoming exit, Wehrum recently testified during a high-profile House oversight hearing on EPA’s planned rollback of Obama-era vehicle greenhouse gas standards, offering a defense of the plan in an effort to win the substantive and political battle over the measure’s environmental, safety and economic effects.

21. MECA Report Shows Feasibility for Diesel Trucks to Meet Low NOx Standards

The Manufacturers of Emission Controls Association (MECA) has released a new report\(^1\) that provides an assessment of market-ready technologies being commercialized by suppliers of emission control and efficiency components for heavy-duty diesel vehicles to meet lower intermediate standards for oxides of nitrogen (NOx) by 2024 as a transition to final standards in 2027. The report presents test results and emission models from fully aged aftertreatment systems installed on heavy-duty on-road engines to offer several compliance paths that are achievable by model year 2024 without significant changes to today’s engines or aftertreatment systems.

The main conclusions in the report include:

- Several advanced technology options can be deployed on heavy-duty engines and vehicles to reduce NOx emissions by 75% below today’s heavy-duty FTP NOx standards while also meeting the 2024 heavy-duty Phase 2 greenhouse gas limits and reducing the total cost of ownership of trucks.

- Strategies for reducing emissions during cold start and low load operation, combined with improved engine calibration and control of urea dosing, can be implemented to enable heavy-duty trucks to achieve an FTP NOx emission limit of 0.05 g/bhp-hr and a low-load cycle limit below 0.2 g/bhp-hr. These same technologies will deliver low temperature NOx conversion in the real world as part of the newly proposed moving average windows-based compliance program.

\(^{1}\) “Technology Feasibility for Model Year 2024 Heavy-Duty Diesel Vehicles in Meeting Lower NOx Standards,”
• The cost of controlling NOx to 0.05 g/bhp-hr in 2024 and to 0.02 g/bhp-hr by 2027 will be less than the cost of emission control technology in 2010 because, over the past nine years, ingenuity and innovation have downsized emission controls by 60% and substantially lowered their cost.

“Both the U.S. EPA and the California ARB have announced rulemakings focused on strengthening the current heavy-duty emission standards. Getting to ultra-low NOx and greenhouse gas emission levels will require a systems approach of advanced aftertreatment technologies, efficient engines, and clean fuels,” MECA’s Executive Director, Rasto Brezny, said. “MECA and our member companies have played an important role in the environmental success story associated with mobile sources in the U.S. for over 40 years. To achieve our country’s air quality goals, we must ensure trucks are as clean as possible as the heavy-duty fleet moves toward electrification. MECA members are committed to delivering the technology solutions and supporting the regulatory policies to continue to reduce emissions from this sector.”

22. Trump Splits With Rest of G-20 Again on Climate Change Action

President Donald Trump again split from other Group of 20 nations over climate change, with the U.S. rebuffing the need for the Paris Agreement to reduce emissions.

Negotiators had worked through the night to try and reach agreement on the communique released Saturday after the G-20 summit. The so-called 19+1 formula on climate change is similar to what was agreed at the gathering last year in Argentina.

“The United States reiterates its decision to withdraw from the Paris Agreement because it disadvantages American workers and taxpayers,” the document says. It also says the U.S. “is a world leader in reducing emissions” and is committed to deploying advanced technologies to clean up the environment.

The other 19 nations committed to the full implementation of the Paris Agreement and its “irreversibility.” They emphasized the importance of providing financial resources to developing countries as part of the deal.

The wrangling reflects the broader divide on show in previous summits, where Europe and others are seeking to preserve a global system of economic rules that Trump frequently attacks as outdated and unfair. The whole process is overshadowed by the U.S.-China trade war and Trump’s threats to take tariff action against Japan, India, and Europe.

The U.S. generally wants shorter, whittled down statements that don’t go into heavy detail or cover issues seen as less core such as climate, one official said. It’s gotten so bad that countries at one point argued over how to clean up plastic rubbish from the world’s oceans, another negotiator said earlier.

French President Emmanuel Macron acknowledged the communique process at multilateral summits has problems. France is hosting the Group of Seven meeting in August, and Macron told reporters he’s “going to try a new method” for that gathering.

That means smaller statements and engagements that countries can choose to sign or not sign, he said.
“I’ve seen G-7 communiques signed at seven only to see the U.S. pull out of the Paris Accord, and now we have to have fights over whether to have communiques signed at 19 or 20.”

23. Senate Democrats Push to Keep U.S. in Paris Climate Accord

Sen. Jeanne Shaheen will soon introduce legislation to stop the Trump administration from leaving the Paris climate agreement, mirroring a House bill that passed earlier this month.

The New Hampshire Democrat announced that she will introduce the International Climate Accountability Act. The bill would prevent the White House from spending money to withdraw from the 2015 global agreement to curb greenhouse gas emissions.

In 2017, President Donald Trump announced his intention to remove the U.S. from the agreement, though he can’t do so until 2020.

“The President’s intention to withdraw the U.S. from the Paris Climate Agreement is highly reckless and unravels significant progress made to mitigate the effects of climate change,” Shaheen said in a statement.

Shaheen’s bill would require the Trump administration to develop a strategic plan for the country to meet its greenhouse gas emissions reduction target under the agreement, which the Obama administration set to at least 26% below 2005 levels by 2025.

The Paris Agreement was negotiated by 196 countries to keep global temperatures below a 2 degree Celsius (3.6 degrees Fahrenheit) rise from pre-industrial levels.

The House voted 231-190 on May 2 in favor of H.R. 9, known as the Climate Action Now Act. It was the first climate legislation to pass the chamber in nearly a decade.

Under the nonbinding Paris Agreement, countries made nationally determined contributions to reduce greenhouse gas emissions over time.


Building and construction companies doing business with New York state will have to retrofit or replace their older diesel vehicles by year’s end because no language to block the requirement—enacted more than a decade ago—was passed by the Legislature this year.

A bill (A.11340/S.8185) known as the Diesel Emissions Reduction Act, or DERA, passed in 2006, required the fleet of heavy-duty vehicles owned by the state, and businesses doing work for the state, to use ultra-low sulfur fuel. It also required those vehicles purchased before 2007—such as dump trucks, cranes, backhoes, and others used in construction—to be retrofitted or phased out to reduce diesel exhaust particle pollution.

Lawmakers for years yielded to concerns of the building and construction industry, putting provisions in state law to delay the implementation. But in the 2019 legislative session that ended last week, the Democratic-lead Legislature afforded—if quietly—no such respite. So, the provision will take effect Jan. 1, 2020.

“We’re finally going to get these vehicles off the road,” said Conor Bambrick, air and energy director at Environmental Advocates of New York. “It’s been too long that we’ve had to wait, to
suffer under the pollution that these vehicles are causing. It’s really too bad that we’ve had to wait
this long.”

State officials said about 97 percent of state-owned vehicles already are compliant, but it’s difficult
to estimate how many contractors would be affected.

Industry advocates are now looking to the state to provide details on how it will enforce the law. They cite concerns about the cost of compliance, particularly for small businesses that may not have phased out their older vehicles yet.

“It’s a challenge both for the private sector that does work for the state, and also for the state agencies,” Mike Elmendorf, president and chief executive officer for Associated General Contractors of New York State.

The implementation of the law comes after the state Legislature last week passed its version of the Green New Deal, setting the most aggressive clean-energy targets in the country. The climate bill, which still must be signed by Gov. Andrew M. Cuomo (D), calls for an 85% reduction in economywide emissions from 1990 levels by 2050.

Advocates have lauded it as the best environmental legislative session in a generation, attributing the passage of many bills that have stalled for years to the new Democratic majority in the Senate. The change helped allow the diesel fuel emissions law to fully take effect, they said.

The state’s law regarding diesel fuel emissions came as the Environmental Protection Agency in 2006 began phasing in more stringent ultra-low sulfur regulations, limiting sulfur content to 15 parts per million in diesel fuel.

California, which has some of the worst air quality in the nation, has been at the forefront of regulating diesel fuel, having passed its low-sulfur diesel fuel regulations in 2003.

Under New York’s law, diesel-using vehicles that weigh 8,500 pounds or more that the state or businesses contracting with the state use must be retired or retrofitted to reduce pollution, including emissions of nitrogen oxides.

This doesn’t apply to vehicles purchased after 2007, after which all heavy-duty diesel vehicles were required by the EPA to comply with the more stringent emissions standards.

The law sets out a phase-in period, which has since passed. It also provides a waiver, allowing the vehicle to be used as is for one year, after which it must be retired.

“State agencies have made substantial progress to comply with DERA, both through retrofits and replacing older vehicles,” according to a statement from the state Department of Environmental Conservation.

Of the 11,969 on-road heavy duty diesel vehicles subject to the law, about 97 percent were compliant in 2017, according to the most recent data available from the department.

Most—about 7,369—of the state’s vehicles are already certified to 2007 and newer standards, according to the DEC. An additional 4,088 were retrofitted, and 199 received waivers, according to the department. Some federal funds can be used to replace non-compliant vehicles.
About 90 percent—about 2,600—of the state Department of Transportation’s vehicles comply, and the rest are expected to be by the end of the year, department spokesman Glenn Blain said in an email. The department has been phasing out its high-emission diesel vehicles, the cost of which has been factored into its annual vehicle replacement program, he said.

It’s unclear how many contractors will be affected, said Elmendorf of the state general contractors association. The association has around 600 members statewide, including general, specialty, and subcontractors. Many of the vehicles already have aged out and have been replaced due to the length of time since the law’s passage, Elmendorf said. The smaller companies don’t buy as much equipment, or as frequently, so they may have more difficulty complying with the law.

The law won’t impact subcontractors or material supplies, like those transporting sand and gravel to a construction site, as a result of a court decision on a lawsuit challenging the DEC’s regulations.

Purchasing new equipment can be extremely costly, but retrofitting also comes at a price, said Dave Hamling, president and CEO of the New York Construction Materials Association. The DEC estimated costs to install retrofits to be between $10,000 and $20,000, noting that it may exceed the value of the vehicle.

The trade associations argue that retrofits often produce undesirable results, decreasing fuel efficiency, or output and horsepower. The result: either more trucks on the road or more fuel being used, Hamling said.

And noncompliance will be just as costly. The state Department of Environmental Conservation will enforce the law through contractual language, according to an emailed statement from the department. A first violation of air pollution regulations would result in a minimum fine of $500 and maximum of up to $18,000, according to the department. The fine for subsequent violations is $26,000.

The trade associations and their members are waiting to see how the state rolls out the 13-year-old law, and more importantly, how it’s enforced, Hamling said. “How are they going to enforce against the private sector company when the state vehicle may be on the same site that’s non-compliant?” he asked. “There’s some real significant policy issues at work here.”


A petroleum industry official is doubting whether the EPA will be able to complete its review of national air quality standards for ground-level ozone by 2020. The Environmental Protection Agency plans to review whether to tighten air quality standards for ozone and fine particulate matter by March 2020. The EPA hasn’t set a date for issuing its final review, but top agency officials have reiterated the agency’s plans to meet the 2020 goal.

“It’s a heavy lift,” Howard Feldman, senior director of regulatory and scientific affairs at the American Petroleum Institute, the oil and gas industry trade group, said during an Air & Waste Management Association panel discussion on EPA’s regulatory priorities.

The Clean Air Act requires the EPA to review national ambient air quality standards for ozone every five years, but the agency has rarely met that deadline. The agency tightened the ozone standards to 70 parts per billion in 2015.
Ground-level ozone, a chief component of smog and a known lung irritant, is formed by pollutants released by fossil fuel combustion that drives vehicles and generates power. Power plants, refineries, and other industrial plants shy away from tightened ozone standards because if they are located in an area that doesn’t meet the federal limits, they have to add additional, often costly controls for ozone-forming pollution.

Former EPA Administrator Scott Pruitt last May set the 2020 goal for the review of ozone and fine airborne particle pollution. This meant the agency had less than two years to start the ozone limit. A memo from Pruitt at that time called for the agency to “streamline and standardize the process for development and review of key policy-relevant information.”

Feldman said the American Petroleum Institute supports the EPA’s plan, but “we all know the review process can’t be completed in five years.” And that’s true not just for this EPA administration, but for all other administrations, he added.

The EPA’s review of ozone standards involves the assistance of its chartered Clean Air Scientific Advisory Committee, which considers the latest science on health effects and risk before making a recommendation to the EPA administrator.

Asking the agency to review the latest science in a compressed time frame is a “challenge,” Feldman said.

Jack Broadbent, chief executive officer for the Bay Area Air Quality Management District, agreed with Feldman. The Bay Area management district serves nine counties surrounding the San Francisco area.

Broadbent said the EPA is not only significantly behind in its ozone review, but is also setting itself up for litigation, which in turn will cause it to fall further behind.

26. Carnival Pays $20 Million Fine to Settle Ship Pollution Claims

Carnival Corp., the world’s largest cruise operator, agreed to pay a $20 million fine for its ships' continuing pollution, despite its 2016 agreement to clean up its act. The Miami-based company reached the settlement June 3 with federal prosecutors, including plans to appoint a chief compliance officer. The company also agreed to reduce the use of single-use plastics 50% across its fleet and reduce the total weight of the food waste the company creates by 10% by the end of 2021.

“The company pleads guilty,” Carnival CEO Arnold Donald said six times in Miami federal court in response to charges of violating probation for falsifying records, communicating through back channels with the U.S. Coast Guard, undermining its environmental compliance officer, improperly preparing ships for visits by a court-appointed monitor, and dumping plastic in Bahamian waters.

Donald, Carnival Chairman Micky Arison, and other company executives signed the settlement, which was accepted by Senior Judge Patricia Seitz of the U.S. District Court for the Southern District of Florida.

Carnival also agreed to additional inspections of its ships, will create a better process for reporting violations and restructure its compliance and training programs, among other changes. The company could be fined from $1 million a day up to $10 million if it fails to meet certain deadlines.
“We take full responsibility for not having assured our teams were set up for success,” Donald said.

The company was charged with violating its probation from a 2016 case over environmental crimes on the ships of its subsidiary, Princess Cruise Lines Ltd. Seitz then ordered a $40 million fine for dumping oily waste into the sea, which the U.S. Justice Department called the largest criminal penalty ever in a case of deliberate vessel pollution.

Federal prosecutors said the violations were deliberately made and concealed from 2005 through 2013. The subsidiary pleaded guilty to seven felony charges including conspiracy, obstruction and violating a U.S. law, the Act to Prevent Pollution from Ships. Princess Cruise Lines and Carnival Corp. began a five-year probation in April 2017.

In an April 10 hearing, Seitz called the cruise line “a recidivist criminal,” comparing it to a defendant making excuses for repeatedly failing a drug test. She blasted the company’s leadership, including Arison and Donald, for leaving environmental compliance to “the lower-level guys” and ordered them to appear in court.

Seitz also threatened to bar the cruise line from docking its ships at any U.S. port. She also said she’d like to put the executives in detention so they can think about the criminality of their actions and called the $40 million fine “a drop in the bucket” for the company.

At the June 3 hearing, Seitz told Donald that his company’s success depended on its environmental stewardship beyond the remainder of its probation.

“If it weren’t for the environment, you would have nothing to sell,” she said.

Carnival owns nine cruise brands and 105 ships. The company reported a profit of $3.15 billion for its 2018 fiscal year.

27. New Hampshire Less Likely to Join in Regional Vehicle Emissions Goals

The chance that New Hampshire would join a regional initiative to cut greenhouse gas emissions from transportation dimmed June 25 with the veto action of Republican Gov. Chris Sununu. The Democratic-led House and Senate had passed a bill (S.B. 275) directing the state to join with nine others in the Northeast to cut carbon emissions from vehicles.

But Sununu said when he vetoed the bill June 25 that the “state of New Hampshire is already making great strides in this and should not set arbitrary deadlines that will unnecessarily drive up taxpayer costs.”

Democratic leaders said they would attempt a veto override but that the vote had not been scheduled yet.

The regional Transportation Climate Initiative taxes wholesale transportation fuels and operate as a sort of cap-and-trade program, modeled after the Regional Greenhouse Gas Initiative. The Regional Greenhouse Gas Initiative is credited with significantly lowering power plant emissions in the northeast.

New Hampshire is the lone New England state not yet participating in the transportation initiative.

27
Since power plant emissions have been cut, vehicle emissions are now estimated to contribute about 40 percent of the pollution that leads to global warming.

The bill would have required the state to convert its own fleet to zero emissions vehicles by 2039, at a cost of about $28 million.

“This move is unfortunate and short-sighted,” Jordan Stutt, a director at the Acadia Center, an environmental organization that helped organize the transportation initiative, said. Stutt pointed out that other Republican governors in Massachusetts, Maryland, and Vermont are playing a leading role in the initiative.

The program may bring as much as $100 million a year to New Hampshire if the state participates in the initiative, Stutt said.

The New Hampshire Business and Industry Association didn’t take a position on the bill, Kevin Flynn, spokesperson for the group, said.

28. California Airport Shuttles Going Emissions-Free by 2035

Shuttles serving California’s 13 largest airports will have to be zero-emission by 2035 as the Golden State works to curb air pollution from the transportation sector. The California Air Resources Board voted unanimously June 27 to require all public and private fleets that drive fixed routes onto airport grounds to convert to vehicles with zero emissions of carbon dioxide and other ozone-forming pollutants. The rule will apply to shuttles operated by parking facilities, rental car agencies, and hotels.

State officials said an estimated 1,000 airport shuttles would be affected and the rule could reduce greenhouse gas emissions by at least 500,000 metric tons. Fleet owners should also see millions of dollars in savings from reduced fuel and maintenance costs.

“Shuttles are a vital part of airport activity,” Richard Corey, CARB’s executive officer, said, adding that it would give customers “clean, quiet transport.”

The move, which will be phased in over time, would also reduce emissions in communities near the airports.

Fleet owners are required to report vehicle details by 2022. In 2027, 33% of a fleet will have to be zero-emission, increasing to 66% by 2031 and 100% by 2035.

“The transportation sector is California’s hard nut to crack,” said Rocky Rushing, senior policy advocate for the Coalition for Clean Air. “This will bring us closer to a carbon-free future.”

Forty-eight zero-emission vehicles are serving nine airports now, with nearly 100 on order, state officials said.

The state’s air board also approved regulations at its monthly meeting that would make it easier to use public electric vehicle charging stations. Under the new rules, people who want to charge can’t be required to be a member or pay a subscription fee. They must also be allowed to use mobile pay or a credit card, one that has an embedded chip and not just a strip on the back.
Opponents said requiring chip-reading credit card machines could be costly to implement and would not stand up in the face of changing technologies.

Supporters said it was time for charging stations to be easier to use if the state was going to meet its goal of 5 million zero-emission vehicles on the road by 2030, and at least 250,000 charging stations by 2025.

The regulations have been six years in the making and were called for under a 2013 bill. “It’s time to move forward,” said former Sen. Ellen Corbett, who authored the original bill.

29. As Massachusetts Looks To Boost Electric Vehicle Adoption, Norway Offers A Model

Mobile Skøyen, a Nissan dealership in the Norwegian capital of Oslo, offers a full range of the automaker’s vehicles, from sedans to compact SUVs. Outselling them all: the all-electric Nissan Leaf. About 95% of the cars bought from Mobile Skøyen are battery electric vehicles, and most of those are compact Leafs.

In Norway, this dealership is not alone. Electric vehicle sales are soaring in the oil-exporting Nordic country. In March, electric vehicles outsold gas and diesel vehicles for the first time, accounting for 58% of vehicle sales — twice the share from the previous March. The numbers are even higher in Oslo. Take a casual walk through the city and it is hard not to notice the Leafes, Teslas, and Volkswagen eGolfs cruising the streets.

As Massachusetts looks to put more drivers in electric vehicles, Norway’s transition from fossil fuels in transportation offers potential lessons for the state.

Norway’s surge in electric vehicle adoption is widely attributed to a generous package of financial incentives that make going electric not just feasible, but financially advantageous. The country’s incentives began nearly 30 years ago, with the elimination of the purchase tax — a variable fee based on the weight and emissions of a vehicle — for electric vehicles. In 2001, the government sweetened the deal by exempting electric vehicles from the 25% value-added tax charged on new vehicle purchases.

Even with higher base prices for electric models, these exemptions add up to savings. An eGolf, for example, has a base price about $12,500 higher than the conventional Golf. But when taxes are added, the gas-driven version costs about $900 more than the eGolf.

Owners of electric vehicles also get ongoing financial perks. Until recently, road tolls, ferries, and municipal parking were all free for electric vehicles; going forward, electric vehicle drivers will pay, but their fees will be capped at 50% of the full rate. And there are also fuel savings. Gas prices in Norway currently average the equivalent of about $7.40 per gallon; with Norway’s traditionally low electricity prices, charging is a far less expensive option than filling up.

These smaller, cumulative benefits have been an essential factor in electric vehicle adoption, said Unni Berge, spokeswoman for the Norwegian Electric Vehicle Association. In fact, her own mother made the switch to electric when new tolls came into effect in her town, she said.

Then there are the connected issues of range anxiety — the worry that an electric vehicle won’t be able to make it far enough for the driver’s needs — and charging infrastructure. Range anxiety has diminished as electric vehicle technology has improved and consumers have become more
familiar with the vehicles’ capabilities, Berge said. Still, more charging stations are needed to keep the momentum going, she said.

The first wave of electric vehicle buyers was more likely to be people who live in single-family or detached homes, giving them access to outdoor outlets or space to install a charging box. “The main thing you do when you buy an EV is you charge at home,” Berge said. “You start every day with a fully charged car.”

As the electric vehicle market becomes more saturated, there is more need for charging options in public places and for apartment dwellers who have to depend on garage or street parking.

Norway is in the process of meeting the swelling demand. In 2015, the world’s first electric vehicle-only indoor parking garage opened, providing 102 parking spots and charging points just steps from Oslo city center; in 2017, another 100 spots opened up in a parking garage in a neighborhood north of the center.

Oslo has plans to build fast chargers on the corridors into and out of the country, and in some places the market has grown robust enough that private companies are building charging stations for their own financial gain, Berge said. “This is quite a big infrastructure upgrade we are doing in Norway right now,” she said.

As Massachusetts lays plans to achieve its own electric vehicle goals, experts agree that, as in Norway, financial incentives are key. Yet there is also wide consensus that not nearly enough money is being devoted to electric vehicle adoption programs, nationwide or in Massachusetts, to achieve any significant levels of market penetration.

The state has declared its intention of putting 300,000 electric vehicles on the streets by 2025, but today there are only about 18,000 electric vehicles registered in the state. At the same time, Massachusetts has committed to reducing greenhouse gas emissions 80% by 2050, and transportation currently accounts for 43% of carbon emissions in the state.

In 2014, the state launched the Massachusetts Offers Rebates for Electric Vehicles program (MOR-EV), providing rebates of $2,500 on the purchase of new electric vehicles. The program has been very popular: It was receiving $2 million in rebate requests each month by last fall and had issued a total of $28 million in rebates by the end of last year.

Then, in December 2018, the state announced the rebate would drop to $1,500 on January 1, 2019, and end on June 30, 2019. Rebate requests spiked in December, and then fell off precipitously in 2019.

“It’s going to be hard for the state to meet its EV goals without a rebate,” said Larry Chretien, executive director of the Green Energy Consumers Alliance, which promotes clean energy use in Massachusetts and Rhode Island.

Chretien and others seem confident the administration of Gov. Charlie Baker wants to continue subsidizing electric vehicles, but they acknowledge the difficulty of finding a reliable funding source.

A potential funding stream could soon be the Transportation and Climate Initiative, an effort by nine northeastern states and Washington, D.C. to create a regional cap-and-invest system to
reduce the impact of emissions from transportation sources. The program, however, is still in the planning stages and the ultimate outcome very uncertain.

Expanding access to charging infrastructure is also important, and progress is underway in Massachusetts. National Grid has received approval for its plans to install more than 1,200 charging stations over the next three years and has submitted a proposal that would deploy another 17,000 in a five-year span. Eversource has plans to enable 3,500 new charging ports at 450 sites statewide; the utility will pay for all the infrastructure work and property owners or municipalities will pay for the charging devices.

Chretien hopes public education can make a difference in drivers' willingness to consider an EV. To that end, the Green Energy Consumers Alliance’s Drive Green program offers educational resources and organizes test drive events to help demystify EVs. And hopefully, he said, growing awareness, efforts to improve charging infrastructure, and well-funded incentives will eventually add up to widespread change to the way we look at choosing a car.

Despite some American stereotypes that Europeans are more selflessly green than we are, many Norwegian drivers made the switch to electric reluctantly. Yet, even hard-core devotees of internal combustion engines have been won over. Elatyabou rememrsg a customer who was so upset at giving up the gas-fueled vehicles of her past that she cried when he delivered her new Leaf. He saw her again a year later. “Now,” he said, “she loves her car.”

### 30. Colorado To Pursue Mandatory Electric-Vehicle Standard

State agencies are concentrating on developing a mandatory standard to boost the number of electric vehicles in Colorado after talks ended with auto manufacturers about a possible voluntary approach. State transportation, health and energy officials said in a statement that despite numerous conversations and good-faith efforts by everyone, they couldn’t agree “on a voluntary approach that could be considered as a potential alternative to the zero-emission vehicle (ZEV) standard.”

Auto manufacturing trade groups proposed a voluntary approach as state agencies started taking steps to adopt a statewide mandate. In May, the Colorado Air Quality Control Commission voted unanimously to hold hearings in August and consider adopting California’s zero-emission vehicle standard.

At the same time, state officials were talking to the Alliance of Automobile Manufacturers and other trade organizations about a proposal that Colorado explore an alternative, voluntary route. The groups said a commitment by manufacturers to make more electric vehicles available in Colorado, to step up marketing and to invest in charging stations would get more electric vehicles on the road faster than state mandates.

Colorado Energy Office Executive Director Will Toor said in an email that the state wanted certain commitments before considering a voluntary program. Those included investment in infrastructure, enforcement and applying tax credits at the time of the car sale.

“Given the complexities of these issues, we were unable to reach agreement in the time frame that was available,” Toor said.
Bryan Goodman with the Alliance of Automobile Manufacturers said the talks dealt with complex topics that are regulated by antitrust and state motor vehicle franchise laws. “Finding solutions that worked within those confines proved insurmountable.”

Goodman said the auto alliance will participate as Colorado develops its rule. State officials said they are optimistic “that ongoing dialogue with automakers through the rulemaking process will make more electric vehicle models available to Coloradans as soon as next year.”

One of Gov. Jared Polis’ first actions after taking office in January was to sign an executive order reaffirming the state’s commitment to increase the number of electric vehicles to help reduce climate-changing emissions. Polis has also set a goal of powering Colorado’s electric grid from 100 percent renewable energy sources by 2040, which would further cut vehicle emissions.

Curbing vehicle emissions is seen as key to addressing climate change. The U.S. Energy Information Administration reported that in 2016, carbon dioxide emissions nationwide from the transportation sector had exceeded those from the electric power sector for the first time since the late 1970s.

New Colorado laws intended to increase the number of electric vehicles include the extension of state tax credits to buy or lease an electric vehicle and allowing investor-owned utilities to own and operate charging stations.

Under a rule based on California’s mandate, a certain percentage of manufacturers’ vehicles sold in Colorado would have to be electric, likely between 6 percent and 10 percent, starting with the 2023 model year.

Last November, the state Air Quality Control Commission approved a rule that requires automakers to boost fuel efficiency. Approval of the more stringent standards in Colorado followed the Trump administration’s proposal to roll back the Obama administration’s requirement for automakers to nearly double the average fuel economy of new cars and trucks by 2025.

California is the only state that has a waiver under the federal Clean Air Act to impose its own vehicle fuel standards. States without waivers can approve a separate standard as long as it’s identical to California’s, which Colorado’s is.

31. British Columbia Passes Emissions Law Banning Sale Of Gas-Powered Cars By 2040

British Columbia has passed an emissions law aimed at curbing the production and sale of fuel-burning cars in the Canadian province, marking North America’s most aggressive legislation to date. The law mandates that 10 percent of all vehicles sold by 2025 be zero emitting, while the sale of fuel-burning cars and trucks will be banned outright by 2040. Zero emission vehicles include battery electric, plug-in hybrids, and hydrogen fuel-cell models.

The law, called the Zero-Emission Vehicles Act (ZEVA), is not without its critics. The CBC says opposition to the ZEVA mostly centers on the law’s potential ineffectiveness, with criticism aimed at the fact BC residents can simply purchase a vehicle in the neighboring Alberta province.

ZEVA also has a credit system for car manufacturers that do not want to or cannot produce the necessary zero emission vehicles, allowing car makers to pay a little extra money to save on the cost of actually developing the required environmentally friendly models. There are also
provisions in the law stating that it can be adjusted depending on the overall production of zero emission vehicles over the next 20 years, in anticipation of an eventual 2040 ban that may ultimately prove too aggressive.

Regardless, ZEVA is a milestone for North America, which lags far behind Europe in legislation regarding fuel-burning cars. Numerous European countries already have in place laws regulating the sale of gas-powered vehicles and laying out incentivizes to increase the number of electric and zero emission ones.

In March, electric vehicles outsold gas and diesel vehicles in Norway for the first time, accounting for 58% of vehicle sales — twice the share from the previous March. The numbers are even higher in Oslo. Norway is even installing the world’s first electric taxi charging system to help it achieve a zero emission country-wide cab fleet by 2023. Meanwhile, numerous other countries have set out targets for banning traditional cars and vans, with Norway aiming for 2025 and France and the UK for 2040 and 2050, respectively. The mayor of Denmark capital Copenhagen went so far as to propose a ban on diesel cars in the city last year that would go into effect by the end of 2019; Copenhagen has since tempered its proposal to aim for net-zero carbon emissions and carbon neutrality by 2025.

In the US, however, citizens bought more than 17 million new cars last year, with just 1.2 percent of them being electric, according to the International Energy Agency. A number of cities, most prominently in California, have mulled over gas car bans to try and move the needle on electric car sales and lower emissions. And recently, a bill called the Zero-Emission Vehicles Act, was proposed in the US House of Representatives seeking to ban the sale of gas-powered passenger cars in the US by 2040. It follows a similar bill from Los Angeles Mayor Eric Garcetti introduced in April that seeks a ban on the sale and use of gas-powered cars in the city by 2050.

But right now, BC, where six percent of all new cars sold are zero emission vehicles, is the only area in North America to actually pass hard legislation.

ASIA PACIFIC

32. Recent Trends in China’s New Vehicle Market

China Starts Implementing Tougher Vehicle Emission Standards

Several provincial-level regions on July 1st started implementing the "China 6/VI" vehicle emission standards ahead of schedule to ramp up efforts against a major source of air pollution. Sales and registrations of new vehicles in regions including Beijing, Shanghai, Tianjin, Hebei Province and Guangdong Province now have to comply with what is believed to be one of the world's strictest rules on automobile pollutants.

In Beijing, all new buses and other heavy-duty diesel vehicles shall follow the new emission rules, while all new vehicles are expected to follow suit starting Jan. 1, 2020.

According to official data, emissions from some 6.2 million vehicles were responsible for 45 percent of Beijing's concentration of small, breathable particles known as PM2.5, a key indicator of air pollution.

Compared with the "National 5/V" standards, the new rules demand substantially fewer pollutants such as nitrogen oxides and particulate matters and introduce limits on particulate number.
The new emission standards were initially set to take effect nationwide from July 1, 2020. A three-year action plan on air pollution control released last July urged early implementation in major heavily-polluted areas, the Pearl River Delta region, Sichuan Province and Chongqing Municipality.

Automakers and the market have been preparing for the tougher rules.

Manufacturers have completed the development of most "China6/VI" models and have entered the stage of mass production and sales, said Liu Youbin, a spokesperson with the Ministry of Ecology and Environment.

By June 20, 99 light vehicle makers had unveiled environmental protection information of 2,144 new models and 60 heavy-duty vehicle manufacturers unveiled information on 896 green models, Liu said. "The market has basically accomplished a smooth transition," Liu said.

Li Hong, an official with the China Association of Automobile Manufacturers (CAAM), said roll-outs of "China 6/VI" vehicles as well as preferential tax and fee policies would boost China's auto market. "The production and sales of new energy vehicles (NEVs) will continue its relatively fast growth," Li said.

Car sales in China continued to drop in May, with about 1.913 million vehicles sold, down by 16.4 percent year on year, CAAM showed. Bucking the trend, sales of NEVs kept growing that month, edging up 1.8 percent year on year.

China saw robust sales growth of NEVs in the first four months this year with 360,000 NEVs sold, surging by 59.8 percent from the same period a year earlier.

Chinese authorities have announced that the tax exemptions on NEV purchases will continue through 2020 to boost the country's green development and retain a strong domestic market.

While Car Sales Plunge In China; Some Hope For Second Half Recovery

China’s passenger vehicle market shrunk for the first time since the 1990s last year, due to a reduction in subsidies for buyers and an economic slowdown which knocked consumer confidence, hitting revenue for the world’s largest carmakers such as GM and Volkswagen. GM’s China sales decreased 17.5 per cent in the first quarter of 2019.

All major foreign brands, with the exception of Toyota and Honda, saw a year-on-year sales decline in May as consumers wait to buy cars ahead of stricter vehicle emissions regulations, which go into effect in many Chinese cities from July.

Retail sales by car dealers fell more slowly last month with a 12.5 per cent decline as dealers worked through their unsold stock.

Beijing has announced several policies to support the sector such as a tax cut for rural consumers, while cities such as Guangzhou and Shenzhen announced they would increase the issuance of license plates by up to 50 per cent. (See story below.)

“Consumers are waiting for stimulus policies,” Jefferies analyst Patrick Yuan wrote in a note. “We believe car wholesale volumes will remain weak in June given the current complexity.”
Car company executives expect the market to pick up in the second half of the year once the emissions regulations are introduced. The measures mean China's auto sales can grow by 2 per cent this year, according to analysts at Moody’s.

Some analysts argue that the worsening of the trade war between China and the US, with both sides introducing new tariffs in the past month, will hit the car market. “The economy in China is still struggling to get on its feet and the trade war is heating up which might have an effect on household sentiment,” said Jochen Siebert of consultancy JSC Automotive, who forecasts sales could decline 5 per cent this year.

**Two Major Cities Relax Limits On New-Vehicle Sales**

Guangzhou and Shenzhen, at the request of the Chinese government, have become China’s first two major cities to ease annual limits on new passenger vehicles sold locally to boost weaker industry volumes.

This year and in 2020, Guangzhou will raise its annual new-vehicle sales limit to 160,000 from 100,000, while Shenzhen will increase its annual cap to 120,000 from 80,000, according to information on the cities' websites. The two cities are in South China’s Guangdong province, the largest provincial market for new vehicles in China. Each city has more than 10 million residents.

More Chinese cities that restrict new-vehicle sales through quota systems are expected to follow suit.

Seeking to reverse a downturn in the domestic new-vehicle market, the national government released policy guidelines in January urging cities to "improve" measures limiting new-vehicle sales.

In addition to Guangzhou and Shenzhen, at least 10 other large Chinese cities, including Beijing and Shanghai, have imposed annual quotas in the past decade on vehicle sales to ease local traffic congestion and pollution.

China’s new-vehicle deliveries contracted in 2018 for the first time in nearly three decades, dropping 4.1 percent to below 23.7 million.

**New Emissions Standards Push Dealers To Sell Old Models Faster**

China's auto dealers are likely to face more pressure in June because of weaker demand compounded by the earlier-than-expected adoption of tougher emissions standards in some regions, according to a leading industry association. The prediction comes on the back of reduced sales growth that has continued for a period of 10 straight months.

"The demand has remained sluggish for months because of the overall economic situation. But as it gets hotter, dealerships are expecting fewer customers than in May," said Lang Xuehong, a deputy secretary-general of the China Automobile Dealers Association. "Besides, farmers in northern China will soon be busy harvesting wheat in June so sales of low-end vehicles will be hurt further," she said.
Lang is not a lone pessimist in the world’s largest car market. Almost half of some 1,000 dealerships that sell 55 brands of vehicles, both Chinese and overseas made, held a similar estimate, according to a recent survey by the association.

Another major source of their pessimism is the adoption of the stricter China 6/VI emissions standards in some 18 provinces and municipalities starting from July, one year earlier than the national plan. When the new standards are put in place, models built in accordance with Stage 5/V standards will not be allowed to be registered.

To make matters worse, as dealers fight against the clock to cut their inventories, some carmakers are forcing them to take on models produced with the old standards instead of new ones, she said.

Considering the situation, Lang said the authorities should offer a three-month grace period to help sell the older vehicles.

Xiao Zhengsan, secretary-general of the association, called for carmakers to play their role in ensuring a smooth transition. "Carmakers should work out a detailed schedule and stop offering old-standard models to dealerships in regions that will introduce the new emissions standards," said Xiao. "If they cannot sell off all old-standard models by July, carmakers should take the models back," he said.

Starting from July 2018, when the first monthly sales dip was spotted, auto dealers have been haunted by poor sales and unhealthy inventories. In this year alone, the Vehicle Inventory Alert Index, a major barometer of the automotive market, has been hovering above 50 percent from January to May.

When the market is healthy, the figure, which is compiled based on such factors as stock, market demand and dealerships' financial conditions, should be lower than 50 percent, said the association. In May, the figure was 54 percent, 7 percent lower than in April. But that was not because of a recovery in market demand but mainly the result of dealerships' promotional campaigns to sell off old-standard vehicles.

"Statistically, we had a better performance, but that was achieved at a heavy cost by the dealers," said Lang. And despite the effort, the figure was 0.7 of a percentage point higher than the same month last year.

Lang said the situation will not turn better in June although sales might grow in some regions, mainly those that have to adopt the Stage 6/VI emissions standards from July. She cautioned that that will have a lot to do with the promotional events instead of real market demand.

To make matters worse, auto dealers in those regions will not have adequate supplies of the new-standard models soon enough, as many carmakers, especially Chinese ones, have not been well prepared for the transition, said Lang.

**China’s New Emissions Rules Take Scalpel To Bloated Auto Industry**

China debuts one of the world’s strictest standards for automobile emissions on July 1 to reduce the country's notorious air pollution, a move some say also is designed to curb the runaway expansion of its automaking sector. Over 100 companies make cars in China, many of which are small to midsize players with little cash or technological prowess. The Chinese government wants
to pare the excess capacity and create an industry characterized less by volume and more by quality.

The new National 6/VI standards will be introduced initially in 15 cities and provinces that face serious pollution -- including Hebei Province, Shanxi Province and Shanghai -- and together account for half of new vehicles sold in the country.

China originally planned the upgrade for July 2020. But President Xi Jinping pushed to accelerate the timeline in areas with severe pollution, under the "battle for blue skies" plan issued last year.

The new Chinese standards aim to reduce emissions of nitrogen oxides and other pollutants 40% to 50% by 2023. They are tougher than the Euro 6/VI standard in effect in Europe.

But Beijing's standards also are expected to help weed out some of China's weaker automakers.

China intends to ease restrictions on foreign investment in stages by 2022, which will give Japanese, U.S. and European automakers greater freedom in their operations in China. The government wants to consolidate its domestic players into larger, more competitive entities before then.

National 6/VI is expected to favor the big automakers with plenty of cash and know-how. "The new environmental standards would put companies' development capabilities and funding to the test and will accelerate the shakeout of small and midsize companies," said an analyst for the auto industry.

The production, sale and registration of cars that meet only old standards will be banned under National 6/VI, forcing automakers to develop more sophisticated engines and other parts. The new rules could increase production costs by 1,200 yuan ($175) per vehicle, according to some estimates.

For context, leading Chinese automaker Zhejiang Geely Holding Group averaged about $1,200 in net profit per unit in 2018. Passing on the extra cost to customers would hurt smaller players that rely on cheaper prices to sell their cars.

Despite the need to roll out National 6/VI-compliant vehicles starting July 1, over 65% of new Chinese-brand vehicles made in April met only the old standards. Landwind and Leopaard are just a few brands that are not ready to produce National 6 cars, sources say.

Smaller players have been pushed out every time China introduced new environmental regulations. Chongqing-based Lifan Motors was acquired by electric vehicle startup CHJ Automotive. Dalian Huanghai Automobile and Westtiger Automobile Industry also have been sold to EV startups.

**Beijing Is The EV Capital Of The World**

The city of Beijing is the driving force behind China leading the global electric vehicle (EV) market, new research has found. This is according to The Tyndall Centre for Climate Change Research, which has projected the expansion of Beijing's electric vehicle market as the city targets 400,000 EV sales next year.
The center says that the growth of the EV market could significantly lower China’s emissions from automobiles, which in 2017 reached 436 million tons and contributed between an eighth to half of the pollutants in cities like Beijing. ‘Introducing electric vehicles appears to benefit the environment, though the benefit is marginal compared to the total amount of vehicular emissions,’ said Chengxiang Zhuge, researcher at the Tyndall Centre. ‘However, with the widespread adoption of EVs, the environmental benefits could become significant,’ he added.

17,000 BEVs were sold in Beijing in 2018, raising the number of battery electric vehicles in the capital to 188,000.

According to Zhuge’s research, CO2 emissions in Beijing could decrease to 38,280 tons on one weekday if battery electric vehicles (BEVs) reach 40,000 sales in the city by 2020.

Beijing had 130,000 charging points in 2018 with 93,000 of them privately installed for home use, while private charging demand is expected to reach 4% of total domestic energy consumption in 2020.

The center’s research suggests that Beijing’s expanding EV market could lead to the rapid addition of further facilities to support EVs such as parking lots, refueling stations and charging points.

Beijing currently plans to reach its target of 400,000 BEVs by 2020 by increasing EVs in taxis, public transport and logistics vehicles, while continuing to promote the electrification of buses and vehicles for its postal services.

Beijing’s target may have been put in doubt by China’s announcement earlier this year that it will be cutting subsidies in EVs with a range below 250km, with more expensive EVs set to see their subsidies cut by as much as 60%.

Instead, China will begin shifting its focus to hydrogen fuel cell vehicles which have a longer range than plug-in electric vehicles.

China has also banned companies from building BEV plants unless they have a minimum capacity of 100,000 units, which will inhibit smaller EV companies.

Despite this, China’s EV market is not expected to slow down, with China still expected to produce 20 million EVs next year. Over two million electric vehicles were sold across the world in 2018.

Beijing Policies Dash Hope For Quick Market Rebound

At the Shanghai auto show in April, most auto company executives expected China’s new-vehicle market, which contracted in 2018 for the first time in nearly three decades, to resume growth in the second half of 2019. But the prospects of a quick rebound are diminishing with Beijing’s resolve to enforce stricter emissions rules and a reluctance to cut taxes on vehicle sales.

The slowing Chinese economy, undermined by U.S. tariffs championed by President Donald Trump, is certainly partly to blame. But another direct cause of the slump in consumer demand is the increasing number of provinces set to adopt tougher vehicle emissions standards ahead of schedule.
Four major cities -- Beijing, Shanghai, Chongqing and Tianjin -- and about two-thirds of the provinces in China have pledged to embrace State 6 emissions standards, similar to the Euro 6 rules, on July 1, one year before the date set by the Ministry of Environmental Protection.

Consumers in these regions won’t be able to obtain license plates for vehicles that fall short of the new standards in July, so they have postponed new-car purchases, leaving dealerships with high inventories of new cars that can only meet the State 5 emission rules.

The prolonged downturn in the market hasn’t deterred Beijing’s push for more provinces to upgrade to the State 6 rules as part of the Blue Sky Protection Initiative launched last year.

China’s current leaders have placed much more emphasis on environmental protection than their predecessors. Today’s economic policymakers, unlike their predecessors, are also reluctant to deploy strong incentives to boost the economy, including the car market.

To be sure, Beijing has embraced some steps to revive new-vehicle sales. This month, it urged major domestic cities to relax limits on license plates for new cars, especially electrified vehicles, and to encourage sales in rural areas.

But the effects of the stimulus the central government advocates are limited because it’s up to city and provincial governments to decide whether to implement the measures.

Meanwhile, the central government has decided not to inject a heavy dose of incentives -- such as a deep cut in new-vehicle sales taxes, as recommended by dealers and that proved highly effective before. The government halved the purchase tax on vehicles with engine sizes of up to 1.6 liters in 2009 during the global financial crisis and revived the cut in 2015 after demand showed signs of stagnating. The market quickly resumed stronger growth both times after the tax slash.

Trump and Chinese President Xi Jinping met this month in Japan but few experts expect bilateral trade disputes will be settled quickly given the complexities involved between the U.S. and China economies, and Trump’s unpredictability. The two leaders did agree to reopen talks. China’s economy, which grew 6.4 percent in the first quarter, down from 6.6 percent in 2018, will remain subdued as the trade war between the world’s two largest economies continues.

**Long-Term Mindset Urged As Vehicle Sales Fall For 11 Months**

Xu Haidong, an assistant to the CAAM’s secretary-general, said the gradual introduction of State 6/VI emission standards hurt sales. Sales in regions with the new standards account for more than 50 percent of China’s total, which severely hit the new vehicle market, according to Xu.

The application of the State 6/VI emission standards comes a year earlier than the national plan. This has not given car manufacturers enough time to adjust their production lines, Xu said.

Car production is doing worse than sales: it fell 21.2 percent year-on-year with 1.85 million units in May. “In that case, potential customers choose a wait-and-see attitude as there are only a few models in line with the new standards,” Xu added.

Shi Jianhua, deputy secretary-general of the CAAM, said: "Chinese brands were affected first amid the continued downturn, which should improve their competitiveness and focus on long-term development."
According to the CAAM, a total of 3.33 million Chinese brand passenger cars were sold in first five months of 2019. This is a slump of 23.4 percent compared with the same period last year. The market share of Chinese passenger car brands declined 4.2 percentage points to 39.7 percent. Only three of the top 15 Chinese passenger car brands saw slight increases in the first five months. They are Great Wall Motors, BYD and Hawtai Motor.

SAIC Motor Corp, the best-seller of Chinese passenger cars for 14 years, saw a year-on-year decrease of 28.1 percent in first five months to 769,000 units.

Geely dropped 13.8 percent year-on-year to 563,000 units in the same period.

The association expects an upturn in the second half of this year when carmakers start to release their State 6/VI vehicles and customers make their decision.

Once energized by rapid growth, the new energy vehicle sector is also affected by national policies. The growth of new energy vehicles slowed pace last month, a meager 1.8 percent growth year-on-year, with sales standing at 104,000 units.

One of the main reasons is commercial new energy vehicle sales, which plunged 53.7 percent year-on-year with 9,000 units delivered last month.

In March, Chinese authorities announced they would stop offering favorable tax subsidies for new energy buses after June 25. This resulted in a rush to buy in earlier months and now a sales slump, according to Xu.

In addition, customers in cities where State 6/VI emission standards will not be enacted soon will prefer State V vehicles that have been heavily discounted, Xu added.

China is releasing some policies to stimulate car sales. Earlier this month, the National Development and Reform Commission called on local authorities to remove restrictions on the purchase of new energy vehicles. Local governments that have enforced restrictions on vehicle purchases should speed up changes depending on their situation, the commission added. (See story above.)

The policy will bring positive effects to the passenger car market and help boost the new energy vehicle sector, according to the CAAM.

Shi said some policies, such as the restriction purchase of vehicles, had a negative effect on the development of the auto industry and carmakers. He added the market needs a healthy and long-term development concept.

**Honda Sales Forge Ahead On CR-V, Civic And Hybrids**

Honda Motor Co. continues to buck the downturn in the Chinese market with June sales at the Honda brand surging 37 percent to 148,382. Driving the gain were the CR-V crossover and Civic sedan, Honda’s China office said.

The CR-V (including its gasoline and hybrid versions) and Civic each posted sales of more than 20,000 in June. And four other models -- the Crider and Fit cars, and XR-V crossovers -- each generated volume of more than 10,000.
Demand for the hybrid versions Honda offers for some of its products is robust even through the sales volumes are still small.

Sales of the CR-V hybrid soared 186 percent to 3,305 while deliveries of the Accord sedan hybrid more than tripled to 2,648, the office said, without revealing the volumes of the other hybrid models.

In the first six months, the Honda brand’s China sales totaled 745,409, advancing 22 percent from the same period last year.

**33. China’s Hydrogen Vehicle Dream Chased by $17 Billion of Funding**

China’s policies to boost its fledgling hydrogen-powered auto industry are coming at just the right time for entrepreneur and former carmaker executive Wang Chaoyun. His startup, Anhui Mingtian Hydrogen Energy Technology Co., makes fuel-cell stacks for vehicles propelled by the element, which produces no emissions from the tailpipe. During Mingtian Hydrogen’s brief existence, the fuel-cell vehicle industry has received more than $1 billion worth of investments from Chinese companies, according to data compiled by researcher BloombergNEF.

“When I set up the company in 2017, it felt like fighting ahead in complete darkness, with people doubting my choice of going down the road of fuel cell,” said Wang, 56, who’s also the general manager. “The lights are on now, with more hands producing a stronger flame.”

China, the world’s biggest car market, is putting its manufacturing and policy might behind hydrogen fuel cells, just as it did with electric vehicles. The government wants 1 million fuel-cell vehicles on the roads in a decade and is seeding that plan with hundreds of millions of yuan to spur research and development, and to subsidize purchases. And, as seen with EVs, a slew of startups and established companies are trying to capitalize.

Wan Gang, who’s been called the father of China’s electric-car movement, said the nation should establish “a hydrogen society.” While China plans to phase out longtime subsidies for the maturing EV industry next year, funding for fuel-cell vehicles may stay in place, he said in a June 9 interview.

BNEF tracked more than $17 billion worth of announced investments in the industry through 2023. One of the largest is China National Heavy Duty Truck Group’s plan to spend $7.6 billion to manufacture fuel-cell vehicles in Shandong province on the east coast.

Mingtian Hydrogen, which translates as Tomorrow’s Hydrogen, plans to invest 2.5 billion yuan ($363 million) for an industrial park in Anhui province to manufacture fuel-cell stacks and associated components. The first phase is completed, said the company, which is backed by the Chinese Academy of Sciences.

It currently supplies stacks in small volumes to Guangzhou Automobile Group Co. and China FAW Group Corp. for passenger vehicles, and it expects to start mass production next year. The company wants the capacity to make 100,000 sets of fuel-cell stacks and components by 2022 before expanding to 300,000 sets in 2028.

Mingtian Hydrogen is seeking to raise 100 million yuan at a valuation of 1 billion yuan, Wang said. The funds would help develop products and expand capacity.
Its domestic competitors include Sunrise Power Co., Shanghai Shenli Technology Co. and Guangdong Nation-Synergy Hydrogen Power Technology.

To be sure, the nation still has a long way to go before the hydrogen society reaches fruition. The number of fuel-cell vehicles on the road -- both passenger and commercial -- will only be about 5,000 by next year, according to government projections.

“The FCV market will depend heavily on subsidies for at least the next five years,” BNEF said in a November research report. “Given the investments made by Chinese automakers and battery suppliers in the EV value-chain, it is still not clear if FCV production will rise rapidly beyond supporting the needs of demonstration projects.”

Wang’s background is in the industry he’s trying to compete with. He spent three decades working for Anhui Jianghuai Automobile Group Corp., Beiqi Foton Motor Co. and Chery Automobile Co. in quality control, product development and sales. He graduated from Shanghai’s Tongji University, the same school where Wan Gang served as president.

China may see the mass adoption of hydrogen fuel-cells in commercial vehicles within five years and in passenger vehicles over the next 10 years, Wang said. That time span is required to establish a reliable supply chain, ranging from hydrogen production to refilling stations.

“Industry players need to be prepared for the long march and don’t hesitate or give up easily,” Wang said in a June 20 interview.

In a typical EV, lithium-ion batteries store electrical energy produced outside the car.
Hydrogen fuel cells use a chemical reaction to produce energy, converting hydrogen stored in the vehicle into electricity, and emit only water vapor. Hydrogen has a higher energy density than lithium-ion batteries, meaning fuel-cell vehicles typically recharge faster, weigh less and have a longer driving range than EVs.

The government’s “Made in China 2025” industrial blueprint promises continued support for both electric and fuel-cell vehicles.

China introduced subsidies for new-energy vehicles in 2009, according to BNEF. For the years 2016 to 2020, the subsidies for fuel-cell vehicles can range from 200,000 yuan per passenger vehicle to 500,000 yuan for a heavy commercial vehicle.

“It feels like springtime coming,” Wang said. “The industry is becoming more and more vibrant since last year, and it’s like we’re throwing a celebration feast with a lot of people joining.”

34. Behind China’s Big Bet On EVs: A Wave Of Detroits

Pieces of an electric vehicle hang from the ceiling of the Chinese real-estate developer’s showroom, evoking an edgy installation at a modern art museum. In reality, they’re a symbol of the nation’s industrial ambitions.

Just down the neatly manicured road, about a dozen skyscrapers rise from the fields as Shunde New Energy Vehicle Town takes shape inside the city of Foshan, part of southern China’s manufacturing heartland. Local officials boast that their planned hub for EV production and research could eventually generate 100 billion yuan ($15 billion) in revenue for the hometown economy.

Shunde is one of at least 20 electric-centric versions of Detroit under construction as China goes all-in on a technology projected to sell in record numbers this year. President Xi Jinping wants the nation’s 500 electric vehicle makers to be magnets for ancillary industries as he pushes to build a manufacturing superpower by 2025. That blueprint -- meant to make China more self-sufficient and diversify an investment landscape dominated by volatile property and equity markets -- has become central to the U.S.-China trade war.

Municipalities needing ways to recalibrate their economies want a piece of that plan. They’re offering cheap land, tax breaks and housing subsidies to carmakers, parts suppliers and engineering labs in hopes of attracting thousands of high-technology jobs in the burgeoning EV sector.

“The new-energy vehicle industry is a bet local governments must take,” said He Xiaopeng, chairman of Xpeng Motors Technology, an EV startup backed by e-commerce giant Alibaba Group Holding and Taiwan’s Foxconn Technology Group. “A successful EV maker could bring at least 200 companies in the industry chain into a province.”

The amount of investment committed to developing these EV towns is a staggering 209 billion yuan -- equal to about $30 billion -- so far, according to Bloomberg calculations based on public announcements. The commitments range from fixed-asset investments to development costs by carmakers, private capital and local government-backed entities.

The other hubs include Geely Automobile Holdings’ plan for a research and production base in Yiwu, LeEco Vehicle Ecological Town in Huzhou and Self-Driving Auto Town in Xiamen.
The towns are typical of China’s command-led approach to its economy. Enthusiasm at the top levels of government for a particular industry trickles down to the hinterlands, which often respond with experiments recalling the movie “Field of Dreams”: build it and they will come. Localities erect industrial parks, apartment buildings and schools, lay out their incentives and then hope businesses will take up their offers.

Between 2009 and 2017, China spent about $36.5 billion subsidizing EV sales, according to the Center for Strategic and International Studies in Washington. China now accounts for more than half of all passenger EV sales worldwide.

China’s rapid urbanization vacuumed up available land tracts, eventually pushing prices higher and triggering tougher zoning laws. By committing to EVs, local officials may find it easier to get central government approval to redevelop scarce farmland and offer it at below-market rates to lure commercial tenants. That’s attracting some of the nation’s biggest developers, including Country Garden Holdings Co. and China Evergrande Group.

Yet the EV towns are developing just as China’s overall auto sales crater. And while sales of passenger EVs are projected by BloombergNEF to reach 1.6 million units this year, that’s likely not enough to keep 500 companies’ assembly lines humming.

EVs still only account for less than 5 percent of total light-vehicle sales in China, and the government is cutting subsidies to force makers to thrive on innovation instead of handouts.

Those factors have some analysts seeing flashing red lights ahead.

“Most of those EV towns will fail,” said John Zeng, managing director of LMC Automotive Shanghai. “This wave of electric-vehicle building will come to a life-or-death moment. When EV carmakers are being squeezed, the ‘EV Town’ bubble will burst.”

A visit in March to Shunde found its voltage a bit low. No one in Country Garden’s showroom could name the suspended car’s make or model. And there were few gearheads around, with most offices seemingly empty, on a weekday.

In January 2018, Country Garden announced its first anchor tenant -- EV battery maker Shaanxi J&R Optimum Energy Co. But the company struggled to pay its debts and stopped cooperating with Country Garden, forcing the developer to find a smaller substitute.

**35. Mercedes-Benz Spotlights First Pure Electric SUV**

Mercedes-Benz showcased its first fully electric sport utility vehicle - the EQC - in Shanghai, together with its three technical directions it is heading with its electrification, as part of the German automaker’s efforts to realize its vision for zero-emissions mobility.

To improve its electric safety, the model has an auxiliary frame which provides structural protection for the front motor, and an integrated anti-collision frame over the battery pack.

The EQC has been tested over 4.5 million kilometers on four continents. Its bodywork, drive system and air conditioning have been tested in extreme weather conditions with temperatures between -40 C and 60 C.
The new model generates a maximum output of 300 kilowatts and has a top torque of 730 Newton meters, accelerating from 0-100 km/h in 5.2 seconds. Equipped with two compact motors, the EQC can be driven up to 415 kilometers on one charge.

In addition, Mercedes-Benz said it is to provide tailored electric auto services for Chinese customers, including installing intelligent charging piles, providing public charging piles and Mercedes-Benz exclusive charging stations, as well as a 24-hour road rescue charging service.

According to the automaker, its charging service is expected to cover some 300 cities in China, and some 150,000 charging piles will be monitored in real time.

The automaker also unveiled its electrification technical routes on the same day, which are its electric combustion engine technology, its plug-in hybrid technology as well as its battery and fuel cell technology.

Electric combustion engine technology aims to aid vehicles to reduce fuel consumption and carbon dioxide emissions. A 48-volt intelligent motor and an optimized internal combustion engine will be used. The technology has been widely used in Mercedes-Benz models, including the new-generation Mercedes-Benz C-class, E-class, S-class and the GLE SUV.

The new Mercedes-Benz S 560 e L unveiled at the event in Shanghai adopts the automaker's advanced plug-in hybrid technology. The model's fuel consumption per hundred kilometers is 2.1 liters, and its carbon dioxide emissions are 50 grams per km.

The Mercedes-Benz GLC F-CELL is a plug-in hybrid electric vehicle equipped with both the fuel cell and the battery system. With a capacity of 4.4 kilograms of hydrogen, the model can run up to 437 km on one hydrogen refueling.

36. Niti’s New Road Map: Only Electric Vehicles To Be Sold After 2030

The Indian government's think tank NITI Aayog has proposed that only electric vehicles should be sold after 2030, expanding the scope of the clean fuel technology beyond two- and three-wheelers. Earlier, a panel headed by NITI Aayog CEO Amitabh Kant had suggested that only electric-powered three-wheelers and two-wheelers with engine capacity of up to 150 cc should be sold from 2025.

Transport minister Nitin Gadkari has said that the roadmap will be decided after consulting the industry.

Now, it has moved a Cabinet note, seeking to fix responsibility for different ministries, with the road transport and highways ministry proposed to prepare a framework to phase out the sale of diesel and petrol vehicles by 2030.

It has also suggested that the ministry pilots an e-highways program - with an overhead electricity network - to enable plying of trucks and buses on select National Highways. The proposals are part of the plan to manufacture 50 Gigawatt hour (GWh) batteries by 2030.

The plan comes amid intense lobbying by the automobile industry, which is opposed to the push for 100% electric vehicles, with the Japanese and Korean companies leading the charge with support from Indian veterans such as Rahul Bajaj and Venu Srinivasan.
The Cabinet proposal has suggested that Gadkari’s ministry should be tasked with issuing norms for cab aggregators to replace all diesel and petrol-fueled vehicles with EVs by 2030. Similarly, the heavy industries ministry would go for complete replacement of all diesel/ petrol vehicles with EVs of all central ministries, agencies and public sector by 2030.

To meet the target of setting up of the Giga-scale battery manufacturing, the think tank has proposed extending financial incentives to the investors including cash subsidy on the basis of overall domestic value addition per kilowatt hour (KWh) basis.

It has estimated that the annual subsidy outgo would be around Rs 8,000 crore². The subsidy will be given to the manufacturers after the actual sale.

In its effort to ensure that there is no monopoly of the manufacturers and the batteries are manufactured domestically, the maximum cash subsidy would be for up to 20 GWh per firm and Rs 2,000 cash subsidy will be for one KWh only for 100% domestic value capture, which means the minimum percentage of manufacturing in India.

It has also proposed that any manufacturer has to go for 60% domestic value capture and in those cases the cash subsidy would be Rs 1,200 per KWh.

Sources said the companies bidding for the scheme would have to go for at least 5 GWh battery manufacturing and they would have to achieve the target in five years. In case of failure to meet the target, the cash subsidy per KWh battery would be slashed.

Niti Aayog has estimated that the sale of EVs will help save about Rs 3 lakh³ crore on account of the import of crude oil to meet the growing demand. It has also projected that while 79% of the battery pack can be indigenized only 21% minerals will need to be imported.

The think tank has also said that battery manufacturing in this large scale would generate about 10 lakh direct and indirect jobs. To attract investors, it has also proposed complete tax exemption on the capital expenditure during the first year and other concessions besides making land and other clearances available.

While the Niti Aayog in its Cabinet proposal has suggested the highways ministry identify stretches for electric-highways, Union minister Nitin Gadkari has said India could have such a stretch with help from Sweden. He has said that the upcoming Delhi-Mumbai expressway will be the ideal stretch.

The electric highways are those where overhead electric cable is laid to allow trucks to operate as electric vehicles when on the electrified road and as regular hybrid vehicles at other times. After Sweden, recently Germany started a similar pilot on a stretch.

37. India Plans for Electric Scooters, Rickshaws to Move Millions

Indian Prime Minister Narendra Modi is taking advantage of the post-election honeymoon to push his government’s electric mobility revolution. The government is expected to set new cutoff dates for a full electric transition of India’s biggest mobility segments.

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² 1 crore equals 10 million
³ 1 lakh equals 100 thousand
The plan involves a complete transition to electric three-wheelers, such as auto rickshaws, after March 2023, with no internal combustion engine versions of three-wheelers allowed on the market after that. Scooters and other two-wheelers below 150 cubic centimeters would be battery-powered by the end of March 2025, according to a memo by the government agency NITI Aayog.

Government ministries in charge would have to approve the policies before they become official.

The government is targeting smaller vehicles first because they are more accessible to the local middle class and have the greatest potential for reducing particle pollution from internal combustion engines—a big contributor to air pollution in cities—and greenhouse gas emissions.

In India, 80% of the pollution and greenhouse gas emissions from transportation come from two- and three-wheelers. Of 25 million vehicles hitting the roads in India, only 3 million are cars, and one car has an impact that is just double that of a two-wheeler.

India is “probably the largest and most price conscious country in the world, so what’s required here is that you deliver clean kilometers for citizens and goods at lower cost,” said Clay Stranger, director of the office of the chief scientist at the nonprofit Rocky Mountain Institute, which works in Delhi to deliver clean mobility solutions in cooperation with local institutions.

There is a huge competition for public money, he added, and even the $1.4 billion set aside by the government to aid the EV sector over the next three years isn’t enough to transform the whole mobility system.

“That money is meant to catalyze a systemwide transformation. You have to look for it to approach tipping points where adoption can become based on its own merit, on its own cost competitiveness,” he added.

Some industry leaders are already concerned about the speed of the changes ahead, said Ajay Goel, managing director at the private equity fund SUN Group, where he heads the electric mobility branch.

“I think manufacturers would want a slower transition without a hard end date, while the government wants a faster transition,” he said. Ultimately, he added, “everybody agrees that the transition is coming, but the pace at which it should be supported by the government is up for debate.”

India’s biggest manufacturers, such as Hero MotoCorp Ltd., Bajaj Auto Ltd., TVS Motor Co. Ltd. and the investment holding company Tata Sons Pvt. Ltd., have expressed concern over the coming shakeup, stressing how the migration from internal combustion engines to electric vehicles will be more complex than the plan envisages.

Other manufacturers are less concerned with what the government decides and are just getting ready for any possible scenario.

“We are very clear that the electrification process is underway, and we will be introducing our electric three wheelers by the end of this year,” Malind Kapur, vice president for marketing and channel development and business at Piaggio Vehicles Pvt. Ltd.

“We are going to be fuel agnostic,” he said, “which means we are manufacturing diesel-, LPG- [liquefied petroleum gas] and petrol-fueled as well electric vehicles, and we believe that this will
carry on simultaneously for some time,” as various states will have different regulations and customers different needs.

Piaggio doesn’t see the EV transition as a challenge but rather just a chance to offer a solution to consumers, he said.

The new measures will leave it up to companies to figure out how they will adapt, but the opportunity is huge, Alok Ray, assistant director at the Society of Manufacturers of Electric Vehicles in New Delhi, said, speaking in a personal capacity. “If you want to convert all two-wheelers, then you are looking at about 20 million vehicles,” he said. “Our current fleet is under a hundred thousand, so there’s a big gap.”

Ray said the big companies just need the will to invest, but in practice most are nearly ready.

“They already have the assembly line, the manpower,” he said. “All they need to do is to remove the engine and fit the motor and battery.”

According to Goel, conquering the EV market also means coming up with targeted business models catering to the specific profile of the average Indian consumer. For example, there’s battery swapping, which solves the problem posed by the lack of space for charging stations. Most people in India, he said, don’t have a garage where they can charge their vehicle overnight, and public charging infrastructures are limited in terms of space and return.

“What we are trying to implement is a system where you rent a full battery and give back the empty one,” he explained. “The system can work well, what is unclear is whether the subsidies that the government is currently offering for batteries will also apply to such swap services.”

Under the umbrella national policy, the various states are required to submit additional measures to incentivize the EV transition, depending on the local economy and transportation infrastructure.

In Delhi, Transport Minister Kailash Gahlot said, the government has been “a little cautious” about investing public money in fast-evolving electric-vehicle technology.

The potential for lower emissions is large because about 3 million to 4 million people use public buses each day in Delhi, he said. “We need to switch to more and more electric buses, as well as other public vehicles such as taxis and auto rickshaws, because that’s where the opportunity lies.”

38. Australians Could Have Saved Over A $1 Billion In Fuel If Standards Were Adopted

Road transport is one of the main sources of greenhouse gas emissions and represented 16% of Australia's total carbon dioxide emissions in 2000, growing to 21% in 2016. Total CO₂ emissions from road transport increased by almost 30% in the period 2000-16.

Fuel efficiency (CO₂ emission) standards have been adopted in around 80% of the global light vehicle market to cap the growth of transport emissions. This includes the United States, the European Union, Canada, Japan, China, South Korea and India—but not Australia.

If Australia had introduced internationally harmonized emissions legislation three years ago, households could have made savings on fuel costs to the tune of A$1 billion. This shocking figure comes from preliminary calculations looking at the effect of requiring more efficient vehicles to be sold in Australia.
A report by Transport Energy/Emission Research, looked at what Australia has achieved in vehicle fuel efficiency and CO₂ standards over the past 20 years. While Australia has considered and tried to impose standards a number of times, these attempts were unsuccessful.

Legislative action on vehicle CO₂ emissions is long overdue and demands urgent attention by the Australian government.

The most efficient versions of vehicle models offered in Australia are considerably less efficient than similar vehicles in other markets.

Australia could increasingly become a dumping ground for the world’s least efficient vehicles with sub-par emissions performance, given its lack of fuel efficiency standards. This leaves it on a dangerous path towards not only higher vehicle emissions, but also higher fuel costs for passenger travel and freight.

Australia has attempted to impose CO₂ or fuel efficiency standards on light vehicles several times over the past 20 years, but without success. While the federal government was committed to addressing this issue in 2015, four years later Australians are still yet to hear when—or even if—mandatory fuel efficiency standards will ever be introduced.

The general expectation appears to be that average CO₂ emission rates of new cars in Australia will reduce over time as technology advances overseas. In the absence of CO₂ standards locally, it is more likely that consumers will continue to not be offered more efficient cars and pay higher fuel costs as a consequence.

Available evidence suggests Australian motorists are paying on average almost 30% more for fuel than they should because of the lack of fuel efficiency standards.

The Australian vehicle fleet uses about 32 billion liters of fuel per year.

Using an Australian fleet model described in the TER report, one can make a conservative estimate that the passenger vehicle fleet uses about half of this fuel: 16 billion liters per year. New cars entering the fleet each year would represent about 5% of this: 800 million liters per year.

So, assuming that mandatory CO₂ standards improve fuel efficiency by 27%, fuel savings would be 216 million liters per year.

In the last three years, the average fuel price across Australia’s five major cities is A$1.33 per liter. This equates to a total savings of A$287 million per year, although this would be about half the first year as new cars are purchased throughout the year and travel less and would reduce as vehicles travel less when they age.

The savings are accumulative because a car purchased in a particular year continues to save fuel over the following years. As a result, over a period of three years, A$1.3 billion in potential savings for car owners would have accumulated.

The Australian government is not progressing any measures to introduce a fuel efficiency target. In fact, it recently labelled Labor’s proposed fuel efficiency standard as a "car tax". But Australia has come close to adopting mandatory vehicle CO₂ emission standards in the past.
• In late 2007, the Labor government committed to cutting emissions to achieve Australia's obligations under the Kyoto Protocol. The then prime minister, Kevin Rudd, instructed the Vehicle Efficiency Working Group to: "... develop jointly a package of vehicle fuel efficiency measures designed to move Australia towards international best practice."

• Then, in 2010, the Labor government decided mandatory CO₂ emissions standards would apply to new light vehicles from 2015. But a change in government in 2013 meant these standards did not see the light of day.

• Things looked promising again when the Coalition government released a Vehicle Emissions Discussion Paper in 2016, followed by a draft Regulation Impact Statement in the same year. The targets for adopting this policy in 2025, considered in the draft statement, were marked as "strong" (105g of CO₂ per km), "medium" (119g/km) and "mild" (135g/km) standards. Under all three targets, there would be significant net cost savings. But since 2016, the federal government has taken no further action.

Transport Energy/Emission Research conducted preliminary modelling of Australian real-world CO₂ emissions. This research suggests average CO₂ emission rates of the on-road car fleet in Australia are actually increasing over time and are, in reality, higher than what is officially reported in laboratory emissions tests.

In fact, the gap between mean real-world emissions and the official laboratory tests is expected to grow from 20% in 2010 to 65% in 2025. This gap is particularly concerning when we look at the lack of support for low-emissions vehicles like electric cars.

With continuing population growth, road travel will only increase further. This will put even more pressure on the need to reduce average real-world CO₂ emission rates, given the increasing environmental and health impacts of the vehicle fleet.

The sale of less efficient vehicles in Australia means higher weekly fuel costs for car owners, which could be avoided with the introduction of internationally harmonized emissions legislation.

39. Indonesian President Sued Over Worsening Air Pollution

Environmental groups sued the Indonesian president and several government officials recently over worsening air quality in the capital, Jakarta, one of the world’s most congested cities. Jakarta is consistently ranked among the top 10 most polluted cities in the world, according to Air Visual, a Swiss-based group that monitors air quality.

Pollution levels in the city of over 10 million have spiked in recent weeks to nearly five times the level recommended by the US Environmental Protection Agency (EPA).

“We are suing the government so they will investigate where the pollution comes from and take actions based on their findings,” climate campaigner Bondan Andriyanu told journalists at a central Jakarta district court.

Greenpeace and Jakarta Legal Aid Foundation are suing President Joko Widodo, the environment minister and home minister and three governors on Java island, including that of Jakarta.
In recent weeks, Jakarta’s PM2.5 levels have reached as high as 152. Anything above 35 is considered “unhealthy” by the EPA.

Some residents have complained of respiratory problems. “I can see so much haze at night,” said 23-year-old Cintya Ladyana, who lives on the 25th floor of an apartment building in western Jakarta. “I have also caught the flu and cough.”

AFRICA

40. UN Urges East African Countries To Harmonize Vehicle Emission Standards

The United Nations has urged East African Community (EAC) countries to harmonize vehicle emission standards. Rob de Jong, head of air quality and mobility unit at the UN Environment, told countries to phase off old vehicles that produce dirty fumes and instead promote zero emission vehicles.

"There is need to develop a harmonized approach to ensure that the region has safe and quality air," de Jong told delegates attending EAC workshop on harmonization of vehicle emission standards. De Jong said that the region needs to have similar quality of fuel as is the case with Europe and other parts of the world that is fast changing in line with environmental conservation so the region can enjoy benefits of clean fuel.

He challenged delegates to push for the phase-off of used and old vehicles that pollute the air besides forcing owners to use lots of money in maintaining them.

Remy Duhuze, director of environmental regulation and pollution control at Rwanda Environmental Management Agency (REMA), suggested that all vehicles in the country undergo emission inspection to help prevent air pollution. "The inspection is mandatory for all vehicles with commercial ones undergoing inspection twice within six months," Duhuze noted.

He said that the country has developed a vehicle import strategy, applied strict import regulations and has banned small seater-capacity buses. Duhuze noted that Rwanda is developing a new transport policy that is being informed by the ongoing feasibility study on green mobility.

"The Kigali Motor Vehicle Inspection Center and its satellite centers are equipped with emissions inspection equipment while the national police have also been given hand-held inspection gadgets," he added.

The official noted that sulfur that is caused by vehicular emissions is of concern in Rwanda since it is the major pollutant. He said that in a study that was done in 2011 and 2018, sulfur leads, followed by Nitrogen oxides, particulate matter (PM10) and carbon monoxide.

Duhuze revealed that a standard imposing low sulfur fuel (less than 50 ppm) that was adopted by the EAC is already in force in Rwanda.

He attributed the state of pollution to failure to have motorcycles undergo inspection and the increasing traffic jam in major cities.

According to UN Environment, stringent emission standards are needed to reduce pollution by over 85 percent.
The UN environmental agency urges countries to avoid transport where necessary, shift to cleaner modes of transport and improve transport modes like cleaner cars and buses.

41. EAC States To Harmonize Vehicle Emission Standards

Member states of the East African Community, or EAC, have agreed to harmonize vehicle emission standards to promote clean energy use. The agreement was reached at a recent EAC workshop at the United Nations offices in Nairobi, Kenya, which was attended by 40 representatives from government, oil and vehicle industry, academia, international development agencies, media and nongovernmental organizations. They came from Kenya, Uganda, Tanzania, Rwanda and Burundi.

Better data collection and analysis of vehicle emissions profiles, health impact assessments, and economic implications of various technologies are needed, participants concluded. Consumers also need to be encouraged to shift toward cleaner alternatives.

For a start, annual vehicle inspection and testing of vehicles should be mandatory and standardized and government monitoring systems should be implemented.

Participants agreed that the region should follow Euro 5 equivalent fuel standards and scrutiny of fuel emissions widened from lead and sulfur to include benzene, olefins and aromatics.

Mikael Schuer, product manager at Scania, proposed a regional legislated emission level of Euro 3 as an absolute minimum demand. "Euro 5 standard is our recommended alternative for all urban transports. It is a very robust technology and cost efficient, with very low-cost increase for the technology compared to Euro 3 standard. It can also cope with high sulfur levels without damaging the engine," he said.

Schuer said the region should also demand all imported vehicles, new and used, be supplied with a certificate from the manufacturer. "Organizations and international companies operating in the region should have a clear sustainability agenda by only purchasing transports from operators using vehicles fulfilling minimum Euro 3 standard," he said.

Tanzania is spearheading the formulation and harmonization of standards on vehicular exhaust emission limits among other East Africa Standards. Philipo Makaro, an officer at Tanzania Bureau of Standards, said the working draft for the vehicle emissions has already been circulated to partner states and various comments have been collated to advance from working draft to committee draft.

"Kenya and Uganda have already provided their comments while Rwanda, Burundi and South Sudan are yet to. Since all the EAC countries are in the process of revising their vehicle emission standards, it's important to harmonize them," he said.

The draft covers all types of vehicles including passenger cars, light commercial vehicles, heavy-duty vehicles, and two-and four-stroke motorcycles and scooters.

"It's our hope that the harmonization process will incorporate all the requirements and limits acceptable to all partner states and act as the widely accepted regional standard," he said.

42. Kenya To Promote Electric Vehicle To Reduce Air Pollution
Kenya plans to promote the use of electric vehicles in order to reduce air pollution in the country, a government official said. Martin Eshiwani, director of road and railway transport in the ministry of transport, infrastructure, housing and urban development told a forum in Nairobi that standards for electric vehicles and motorcycles were put in place in December 2018.

"Kenya wants to move towards green vehicles so that it can also achieve its commitments under the Paris climate agreement," Eshiwani said during the Urban Mobility Summit.

Eshiwani said that Kenya has approximately 350 electric vehicles and motorcycles on the roads. He noted that the government is considering implementing a number of fiscal and regulatory measures that will increase e-mobility in the country.

Eshiwani observed that most vehicles standards are geared to the fossil fuels that are most prevalent in the country.

According to the government official, the number of motorbikes licensed is increasing every year due to their affordability and are therefore an emerging source of greenhouse gas emissions.

Eshiwani said that the infrastructure to support electric vehicles on the roads will also be required for a robust e-mobility sector to develop.

He revealed that data from the ministry of health indicates that upper respiratory illness has been on the increase in urban cities due to vehicle emissions.

"The high rate of urbanization coupled with a growing middle class is likely to increase the number of vehicles and so reforms are required to transit the country to a low carbon development pathway," he said.

GENERAL

43. A €5m Global Study Will Explore How Aviation Emissions Impact On Air Quality.

Scientists will collect and analyze ambient measurements of air quality at Madrid–Barajas Airport in Spain, Zurich Airport in Switzerland and Kastrup Copenhagen Airport in Denmark, three climatically different airports, to study the differences between emissions measured under test conditions and from real airport scenarios.

The team will build a sensor network to measure air quality within and around the airports and hope the data will help airports better understand how to improve air quality.

They say their investigations will also focus on the potential of alternative sustainable jet fuel to reduce emissions of pollutants.

The AVIATOR project is being funded by the EU and the Canadian government and will include contributions from academics at Manchester Met University and the University of Cardiff.

David Raper, Professor of Environmental Science and the principal investigator from Manchester Metropolitan University, said: ‘AVIATOR is a holistic approach and builds on previous studies. ‘However, where it differs from previous work is that it is employing a systematic approach which encompasses test cell, on-wing, ambient measurements and detailed modelling to better characterize aircraft emissions and their impact on air quality.
‘Our objective is to provide policy makers, regulators, industry and the public with a comprehensive understanding of the impact that aircraft have on air quality in and around airports.’

Earlier this month, Heathrow Airport published its annual sustainability document, setting out its carbon neutral ambitions, with much of the focus on reducing emissions through offsetting.

Airlines have been slow to move towards low-emission technology or clean fuels, and currently, all flights in and out of UK airports from the EU pay no tax on jet fuel, which campaigners say is blocking innovation in the market.

A leaked European Commission report claimed that an aviation tax would slash emissions by 11% (16.4 million tons of CO2) a year.

**44. Opinion: The Climate Crisis Is Our Third World War. It Needs A Bold Response**

Joseph Stiglitz⁴ has written an op ed regarding the climate crisis. Below are some excerpts.

Advocates of the Green New Deal say there is great urgency in dealing with the climate crisis and highlight the scale and scope of what is required to combat it. They are right. They use the term “New Deal” to evoke the massive response by Franklin Delano Roosevelt and the United States government to the Great Depression. An even better analogy would be the country’s mobilization to fight World War II.

Critics ask, “Can we afford it?” and complain that Green New Deal proponents confound the fight to preserve the planet, to which all right-minded individuals should agree, with a more controversial agenda for societal transformation. On both accounts the critics are wrong.

Yes, we can afford it, with the right fiscal policies and collective will. But more importantly, we must afford it. The climate emergency is our third world war. Our lives and civilization as we know it are at stake, just as they were in the second world war.

When the US was attacked during the second world war no one asked, “Can we afford to fight the war?” It was an existential matter. We could not afford not to fight it. The same goes for the climate crisis. Here, we are already experiencing the direct costs of ignoring the issue – in recent years the country (United States) has lost almost 2% of GDP in weather-related disasters, which include floods, hurricanes, and forest fires. The cost to our health from climate-related diseases is just being tabulated, but it, too, will run into the tens of billions of dollars – not to mention the as-yet-uncounted number of lives lost. We will pay for climate breakdown one way or another, so it makes sense to spend money now to reduce emissions rather than wait until later to pay a lot more for the consequences – not just from weather but also from rising sea levels. It’s a cliché, but it’s true: an ounce of prevention is worth a pound of cure.

The war on the climate emergency, if correctly waged, would actually be good for the economy – just as the second world war set the stage for America’s golden economic era, with the fastest rate of growth in its history amidst shared prosperity. The Green New Deal would stimulate

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⁴ Joseph E Stiglitz is a university professor at Columbia, the 2001 recipient of the Nobel Memorial Prize in Economics, a former chairman of the Council of Economic Advisers, a former chief economist of the World Bank and the author, most recently, of People, Power, and Profits: Progressive Capitalism for an Age of Discontent
demand, ensuring that all available resources were used; and the transition to the green economy would likely usher in a new boom. Trump’s focus on the industries of the past, like coal, is strangling the much more sensible move to wind and solar power. More jobs by far will be created in renewable energy than will be lost in coal.

Some changes will be easy, for instance, eliminating the tens of billions of dollars of fossil fuel subsidies and moving resources from producing dirty energy to producing clean energy.

Taxing dirty industries, ensuring that capital pays at least as high a tax rate as those who work for a living, and closing tax loopholes would provide trillions of dollars to the government over the next 10 years, money that could be spent on fighting the climate emergency.

45. BP Annual Report Sees Energy-Emissions ‘Mismatch’

BP has released the 68th annual edition of the BP Statistical Review of World Energy, the most comprehensive collection and analysis of global energy data. This year’s edition highlights the growing divergence between demands for action on climate change and the actual pace of progress on reducing carbon emissions. "The longer carbon emissions continue to rise, the harder and more costly will be the necessary eventual adjustment to net-zero carbon emissions"

Key findings from the BP Stats Review 2019 include:
- Global energy demand grew by 2.9% and carbon emissions grew by 2.0% in 2018, faster than at any time since 2010-11.
- Natural gas consumption and production was up over 5%, one of the strongest rates of growth for both demand and output for over 30 years.
- Renewables grew by 14.5%, nearing their record-breaking increase in 2017, but this still accounted for only around a third of the increase in total power generation.
- Coal consumption (+1.4%) and production (+4.3%) increased for the second year in a row in 2018, following three years of decline (2014-16).
- The United States recorded the largest-ever annual production increases by any country for both oil and natural gas, the vast majority of increases coming from onshore shale plays.

Introducing the findings for 2018, Spencer Dale, BP chief economist, said: "There is a growing mismatch between societal demands for action on climate change and the actual pace of progress, with energy demand and carbon emissions growing at their fastest rate for years. The world is on an unsustainable path."

"The longer carbon emissions continue to rise, the harder and more costly will be the necessary eventual adjustment to net-zero carbon emissions," concluded Bob Dudley, BP group chief executive. "As I have said before, this is not a race to renewables, but a race to reduce carbon emissions across many fronts."

46. IEA Chief Sees 'Unprecedented Momentum' In Hydrogen Fuel Sector

Hydrogen technology has "vast potential" to become a critical part of a more sustainable and secure global energy system, the International Energy Agency has concluded in a new report. "Hydrogen is today enjoying unprecedented momentum, driven by governments that both import and export energy, as well as the renewables industry, electricity and gas utilities, automakers, oil and gas companies, major technology firms and big cities," IEA director Fatih Birol said.
The report shows that Europe currently spends more public money than the US, Japan or China on research into hydrogen and fuel cell technology. Last autumn, EU energy ministers signed a Hydrogen Initiative to promote hydrogen produced from renewable electricity as a zero-emissions substitute for fossil fuels.

However, the IEA report notes, of 70 million tons of annual global hydrogen production, currently 76% is produced from natural gas, and almost all the rest from coal. “Electrolysis currently accounts for 2% of global hydrogen production, but there is significant scope for electrolysis to provide more low-carbon hydrogen,” the report states.

Hydrogen offers a means of storing the energy from surplus renewable electricity, although the IEA notes there is relatively little of the latter available. However, falling costs mean there is potential for dedicating renewable power to hydrogen production in suitable areas, although the electricity requirements could be huge.

“If all current dedicated hydrogen production were produced through water electrolysis...this would result in an annual electricity demand of 3,600 TWh – more than the annual electricity generation of the European Union,” according to the IEA report.

The IEA notes that existing gas pipeline infrastructure could be adapted to hydrogen transport and estimates that H2 gas imported from North Africa could be delivered to refueling stations in the EU at a cost of US$4.50 per kilogram (equivalent to around €120 per kilowatt hour of energy).

That figure is for hydrogen produced from natural gas using carbon capture, usage and storage (CCUS) technology to trap greenhouse gases. Zero-emissions hydrogen produced from clean electricity would cost around $6.00/kg, or €160/kWh.

In a series of recommendations to policymakers, the IEA suggested making industrial ports the “nerve centers” for scaling up the use of clean hydrogen and expanding its use in road transport.

The Paris-based intergovernmental agency also called for the use of existing gas pipeline infrastructure, and the opening up the first international shipping routes for a global trade in hydrogen.

In a report released simultaneously, the UK-based Institution of Engineering and Technology (IET) concluded there is no reason why Britain’s existing pipeline infrastructure cannot be adapted to safely deliver hydrogen.

The IET report noted that, in addition to powering 40% of electricity generation, natural gas is used to heat 85% of UK homes and provides 50% of energy to industry. It recommends producing hydrogen from natural gas, with carbon capture used to sequester the CO2 produced as a byproduct.

“Hydrogen can also be produced using electrolysis but at present this is less suited for producing large volumes of hydrogen and costs are currently higher,” the IET said.

The European Commission signed up to the zero-emissions hydrogen initiative launched under Austria’s presidency of the EU Council. It has so far declined to endorse a declaration on ‘sustainable and smart gas infrastructure’, put forward in April by the Romanian presidency, which also looks to promote the use of biogas and technologies based on fossil fuels.
Each year, human beings release an increasing amount of carbon dioxide (C02) into the atmosphere; at present, around 40 billion tons per annum. According to NASA’s Earth Observatory, 8.4 billion tons are attributed to the burning of fossil fuels; primarily coal, gas and oil. The European Commission and Netherlands Environmental Assessment Agency lists the most polluting countries (including the EU as a whole and each of its member states). They are China, the US, the EU, India, Russia, Japan, Germany, Canada and Brazil. When measured in terms of per capita emissions, the US and Canada are the biggest culprits, with each Canadian and American emitting an average of >15 tons of CO2 per annum (“carbon footprint”). This is a result of commuting, consumption, domestic energy use, leisure and travel.

CO2 accounts for approximate 76 percent of anthropogenic greenhouse gas emissions. The US Environmental Protection Agency says that combustion (of coal, gas and oil) is the main human activity that releases CO2. Electrical production, which uses coal combustion for its generation, accounts for 32.9% of US CO2 emissions. Transport accounts for 34.2%, which is where oil comes in, as most transport (cars, trucks, planes and ships) relies on petroleum. Industry is responsible for 15.4% of emissions and residential/commercial for 10%.

One barrel consists of 42 gallons (159 liters) of oil. Each day, 96 million barrels of oil and liquid fuels are consumed worldwide. This equates to 35 billion barrels a year. Vehicles are significant CO2 emitters. The majority of vehicles run on oil. There are 800 million cars in the world. According to Automotive Industry Solutions, there are 253 million cars and trucks in use in the US. There are 234 million cars on the roads of Western Europe in a sector that employs 13 million people. The Union of Concerned Scientists reports that half of all carbon monoxide and nitrogen oxides and a quarter of aromatic hydrocarbons, released each year can be attributed to transport. The Union further notes that much of the pollution could be easily reduced by clean vehicle fuel technologies. It’s not just the use of vehicles which causes pollution. The Union also points out that from design, to manufacture, to disposal, vehicle-related pollution is significant.

China’s global CO2 emissions are twice those of US emissions. China equaled and surpassed US emissions more than ten years ago. China’s emissions are largely due to the use of coal and are disproportionately larger than US emissions because of the size of China’s population (there are 1.3 billion Chinese compared to 327 million Americans). Despite having a quarter of China’s population, American per capita CO2 emissions more than double China’s. Personal energy consumption is a major factor. The average Chinese person uses 3,500 kilowatts of energy per hour (kWh) compared with the average American, who uses over 12,000. Personal transportation is another factor. By 2011, in China, there were 68.9 motor vehicles per 1,000 people. In the US, were 786 per 1,000. Consider also the impact of food consumption on emissions. By 2008, the average daily calorie intake in China was 2,900. In the US, it was 3,750.8

Among the poorer countries, the biggest polluters (Brazil, China and India) have the lowest per capita emissions compared to the “developed” nations. By far the least polluting continent is Africa, with some of the most Westernized countries (Algeria, Egypt, Nigeria and South Africa) emitting the most CO2. It is also worth remembering that the poor countries serve as providers of resources, including oil and other raw materials for the West. Factories and assembly plants that

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5 This article is a modified excerpt from his new book, Privatized Planet: “Free Trade” as a Weapon Against Democracy, Healthcare and the Environment (2019, New Internationalist). By Dr. T. J. Coles, director of the Plymouth Institute for Peace Research
use a lot of energy pollute because they produce goods for export to Europe and North America, making shipping and air travel big CO2 emitters. Liberia’s shipping exports, for instance, make it a significant polluter.

The more Westernized countries become, the more likely they are to pollute. In the 1980s, China adopted US-style privatization programs, agreeing to huge inflows of US capital. Within twenty years, China had equaled America’s record on annual CO2 emissions. By the year 2000, US corporations were investing $11.14 billion in China. By 2007, they were investing $29.71bn. This leapt to $53.93bn in 2008 and climbed to $65.77bn by 2014.

Much of the so-called investment is internal to US corporations, as companies looking for cheap labor outsource to China and other poor countries. For example, in 2010 the trade journal Manufacturing and Technology News reported that “[h]undreds of major American corporations are shipping thousands of jobs overseas,” where workers’ rights, pay and health and safety standards are lower. Some foreign countries offer huge tax breaks and foreign direct investment. Big companies and their subsidiaries and divisions offshoring to China, Mexico and other poor countries with low environmental standards, include AT&T, Boeing, General Dynamics, Hewlett Packard, IBM, International Paper, Kingston Technology, Motorola, Nordex, Rockwell Automation, Sony Pictures Imageworks, Staples, Tenneco Automotive and Tyco Electronics.

The Massachusetts Institute of Technology (MIT) estimates that air pollution kills 200,000 Americans every year. MIT’s Laboratory of Aviation and the Environment tracked emissions at ground-level, from industrial smokestacks, vehicles, railways and residential heating. Road vehicle emissions alone kill 53,000 and power generators kill 52,000. California has the worst air quality, with 21,000 persons dying prematurely each year. On average, sulfur, carbon monoxide and other pollutants shorten the lifespans of those affected by a decade. Researchers found that congestion is one of the reasons for large numbers of vehicle-related deaths. Where traffic flows in less populated areas, fewer people are affected. Commercial and private pollution was highest in the Midwest, from the industrialized cities and stretching down to or across Atlanta, Chicago, Detroit, Philadelphia and LA.

According to the World Health Organization, 7 million people die each year as a result of exposure to air pollution. This equates to one in eight global deaths. Air pollution is the single biggest environmental health risk and more than doubles previous estimates. Indoor and outdoor pollution are linked to cancer, ischemic (artery) heart disease and strokes. Poor and less developed countries have the worst air quality, with particularly toxic air in South and East Asia and the Western Pacific. 3.3 million deaths in those regions are attributed to indoor pollution (including work-related air quality) and 2.6 million to outdoor pollution.

Dr. Flavia Bustreo, WHO’s Assistant Director-General of Family, Women and Children’s Health, says: “Poor women and children pay a heavy price from indoor air pollution since they spend more time at home breathing in smoke and soot from leaky coal and wood cooking stoves.” Coal is a particularly bad pollutant, hence its contribution as the second largest cause of air pollution-related deaths in the US. Dr. Carlos Dora, WHO’s Coordinator for Public Health, Environmental and Social Determinants of Health, says: “Excessive air pollution is often a by-product of unsustainable policies in sectors such as transport, energy, waste management and industry.”

The pollutants that drive anthropogenic climate change are not only bad for global temperatures and weather, they are bad for human and animal health, too. But hope is not lost. There are major and important changes occurring among grassroots activists, like the Extinction Rebellion, and
the possibility of a Green New Deal at the political level. These movements need to endure and expand.

**48. WMO Verifies 3rd And 4th Hottest Temperature Recorded On Earth**

The World Meteorological Organization (WMO) has officially evaluated temperature record extremes of 54.0 °C at two locations, one in Mitribah, Kuwait, on 21 July 2016 and a second in Turbat, Pakistan, on 28 May 2017.

In its most intensive evaluation ever undertaken, the WMO Archive of Weather and Climate Extremes, has verified the Mitribah observation as 53.9 °C (± 0.1 °C margin of uncertainty) and the Turbat one as 53.7 °C (± 0.4 °C).

The Mitribah, Kuwait temperature is now accepted by the WMO as the highest temperature ever recorded for the continental region of Asia and the two observations are the third (tied within uncertainty limits) and fourth highest WMO-recognized temperature extremes. Significantly, they are the highest, officially-recognized temperatures to have been recorded in the last 76 years.

Full details of the assessment are given in the on-line issue of the International Journal of Climatology published on 17 June 2019.

“This investigation highlights the fact that we can now conduct extremely in-depth analyses of weather extremes. Rigorous investigations such as this independent temperature sensor calibration give us much higher confidence in our existing climate records and consequently provide a solid basis for examining records being broken around the world and for studies of attribution of extremes to climate change,” said Randall Cerveny, chief Rapporteur of Climate and Weather Extremes for WMO.

“The end result adds to our existing archive of global, hemispheric and continental temperature extremes. This database provides a critical information source for understanding of how extreme the climate and weather of our planet can be, when and where it occurs, “he said.

The WMO Archive of Weather and Climate Extremes includes the world’s highest and lowest temperatures, rainfall, heaviest hailstone, longest dry period, maximum gust of wind, as well as hemispheric weather and climate extremes.

According to the Weather and Climate Extremes archive, the hottest temperature ever recorded was in Furnace Creek, Death Valley, California at 56.7°C on 10 July 1913. The highest temperature for the Eastern hemisphere was set in July 1931 in Kebili, Tunisia, at 55.0°C. Some weather historians have questioned the accuracy of old temperature records. The WMO Archive for Weather & Climate Extremes is always willing to investigate any past extreme record when new credible evidence is presented.

This evaluation is unique in that the committee recommended that both sensors be independently calibrated and simultaneously compared to ensure that the data were as accurately obtained as possible. This additional request had never been made in prior WMO evaluations of a record weather observation. It sets a new and higher standard of validity than any previously accepted extreme.

The investigating committee was composed of metrology (instrument) and climate experts from Italy, Kuwait, Pakistan, Saudi Arabia, France, Spain, Morocco, Egypt, Turkey, Armenia, Iran,
Australia, United States, and the United Kingdom. In particular, a group at the Istituto Nazionale di Ricerca Metrologica (INRIM), under the direction of Andrea Merlone, was instrumental in conducting a detailed and rigorous calibration analyses of the two temperatures sensors graciously sent by the national weather services of the countries of Kuwait and Pakistan, respectively as part of the investigation.

### 49. National Academies Call For Immediate Action On Air Pollution

Countries across the world must urgently adopt emissions controls and air monitoring systems for the worst pollutants, if they are to grapple with the growing problem of air pollution causing millions of deaths each year, five national academies have said.

The Academies of Sciences and Medicine from South Africa, Brazil, Germany, and the United States issued a joint statement on 19 June, which they presented at the United Nations Headquarters in New York, calling for intensified funding and action under a new global compact to tackle air pollution.

“If we do not urgently address this global challenge, air pollution will continue to take a startling toll in terms of preventable disease, disability and death, as well as in avoidable costs of care,” said Marcia McNutt, president of the US National Academy of Sciences. “We need to act much more decisively. We need more public and private investments to tackle air pollution that match the scale of the problem.”

Air pollution causes some 7 million premature deaths every year, with vulnerable people such as women, children and the elderly most at risk. Scientific evidence shows that exposure to pollutants can lead to heart disease, asthma, diabetes, eczema, cancer and impact brain development in children.

Air pollution has also been linked to climate change. If we were to reduce short-lived pollutants such as methane, and black carbon, we could reduce global warming by up to 0.5°C over the next few decades, simultaneously avoiding 2.4 million premature deaths.

According to the academies, the biggest contributor to air pollution is fossil fuel and biomass combustion, used for power-generation, heat and cooking, transport and agriculture. Air pollution from fossil fuels is particularly adverse for humans as it contains large amounts of particulate matter, which enter the body and damage its organs.

With the global economic costs of disease caused by air pollution across 176 countries in 2015 estimated to be US$138 million, the academies call for this preventable problem to be addressed in tandem with climate change mitigation and sustainable development.

The academies recommend that all countries make air pollution reduction a priority by placing emission controls on industry and embracing clean fuels. Where possible, success stories from individual cities and countries should be shared and used as lessons for those grappling to improve air quality.

The global compact would encourage governments, businesses and citizens to increase investment for air pollution measures and work together to improve air quality around the world.

“Air pollution is not only harming our planet and contributing to climate change but cutting millions of lives short,” said Inger Andersen, Executive Director of the UN Environment Program. “It is
encouraging to see the global scientific community come together and call for urgent action on this truly global problem. It is time to place air pollution high on the political agenda.”

50. Exxon Mobil Jumps Into IMO 2020 Fuel Market in Europe and Asia

Exxon Mobil Corp. plans to sell low-sulfur shipping fuels at seven ports in Europe and Asia in the coming months, becoming the biggest supplier so far to leap into the global market that is being transformed by rules to reduce pollution from merchant vessels.

For major refiners, ship fuel has long been a convenient disposal route for bottom-of-the-barrel residual oil products that have been unprofitable. Now, because of their global reach, big providers may be poised to profit by making a cleaner version of the fuel.

Starting in January, the International Maritime Organization -- part of the United Nations -- will require ships to reduce their emissions of sulfur, a pollutant that’s been linked to environmental and health hazards. That’s created a massive shift in the refining and maritime industries, with oil companies scrambling to provide IMO-compliant fuel that has a sulfur content of 0.5% and shipowners concerned about fuel-compatibility issues.

“The majors are trying to operate a business model that’s akin to the airlines, where they say to the big shipping companies, ‘We’ll supply you everywhere; buy from us long term,’” said Alan Gelder, London-based vice president of refining, chemicals and oil markets at Wood Mackenzie Ltd. “They are trying to make sure they are the supplier of choice and capture market share and a better pricing premium. For individual refineries in individual locations, that’s something they just can’t offer,” he said.

Irving, Texas-based Exxon Mobil plans to start selling IMO-compliant fuels based on residual oil as early as the end of the third quarter. The product will be available in northwest Europe at Rotterdam, Antwerp, and Zeebrugge, Belgium; at Genoa and Marseil les in the Mediterranean; and in Singapore and Laem Chabang, Thailand. All of the supplies will be compatible with each other.

Other companies including Italy’s Saras SpA and Israel’s ORL Refineries Ltd. have recently sold their first IMO-compliant products. Royal Dutch Shell Plc has carried out trials of its fuel in multiple ports around the world. China Petrochemical Corp. plans to have the capacity to produce 10 million tons of low-sulfur bunker fuel by 2020.

Compatibility is a key consideration for the use of low-sulfur bunker fuel oil due to the variety of IMO-compliant marine fuels. Different products raise the risk of incompatibility, especially in the first couple of years before shippers have tried out the various fuels on offer and uncertainties ease, according to Wood Mackenzie.

“At some point it will become clear which fuel is compatible with which and there will be a clear market segregation,” Gelder said. “Until that point, we think there’s value in the supply of high quality compatible fuels on a global basis.”

51. Banks Lending $100 Billion to Shipping Get Strict on Climate

A group of financiers with $100 billion of loans to shipowners are about to get stricter on the kinds of vessels they’ll finance as part of a drive to improve the maritime industry’s environmental performance. Eleven major financiers including Citigroup Inc. and Societe Générale SA are for
the first time adopting a set of principles requiring them to maintain their lending books in a way that matches goals in the Paris climate agreement, as well as related targets adopted by global regulator the United Nations' International Maritime Organization.

It means banks will favor financing of cleaner vessels while shying away from those carriers that are more polluting. The shift will potentially help to tighten a well-supplied freight market that's depressed rates, said Michael Parker, global head of shipping & logistics at Citigroup.

“Shipowners will think more carefully about the economic life of the asset,” he said. “Climate is a new consideration they haven’t really had in the past.”

A lack of bank finance today is already keeping new ordering low and the impact of the principles will become evident in the next two-to-three years as shipowners consider new IMO targets and limit orders to cleaner vessels, which might reduce the supply of new ships, Parker said. There’s already a pickup in scrapping of older ships after the IMO imposed clean-fuel rules for ships starting in 2020, he said.

The financial institutions’ so-called Poseidon Principles will establish a baseline to assess and disclose whether the lenders’ portfolios are in line with the climate goals. They’ll also serve as a tool to manage investment risks such as those posed by new fuels standards or carbon pricing. Under the plan, a loan book that’s ready for new climate policies would be more valuable than one that isn’t.

Banks and pension funds are increasingly pushing for companies in many industries to cut emissions in an effort to reduce the risk of wild stock-market fluctuations caused by climate change and new policies. The Climate Action 100+ group says its goal is to drive change at companies contributing the most greenhouse gas emissions.

“The Poseidon Principles rewrite the role that the financial sector can play in helping achieve the goals of the Paris Agreement,” said James Mitchell, a manager in the climate finance and industry programs at environmental group the Rocky Mountain Institute, which helped develop the measures.

The principles for shipping, being adopted by banks that also include DNB ASA, are intended to evolve over time as the IMO tightens its policies. Shipping companies including A.P. Moller-Maersk A/S are also behind the initiative.

The rules initially mean lending would dovetail with a goal that greenhouse gas emissions from international shipping will peak as soon as possible and fall by at least 50% of their 2008 levels by 2050.

“We know that the portfolio that’s aligned with the target today may not be aligned in 2023, when the targets will probably be tightened,” said Parker, who is the chair of the principles’ drafting committee.

The shift should encourage shipbuilders to innovate with designs so vessels can, in future, switch to cleaner fuels such as biofuels, hydrogen or ammonia from the heavy fuel they use today, said Tristan Smith, a reader in energy and shipping at University College London who helped develop the principles. Vessels that don’t have the flexibility to switch fuels may limit their useful life.
It’s possible some shipowners will continue ordering dirty ships, betting rules that damage their profitability won’t come anytime soon, Smith said.

If a carrier isn’t able to attract good rates, its owner will “either have to accept a much lower second-hand value or have to scrap it prematurely,” he said. “It’s a chain of events that isn’t yet in the regulation, but it’s highly foreseeable.”