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EUROPE.....	4
1. European WLTP and Third RDE Regulations Published	4
2. EU Parliament, Nations at Odds Over Vehicle Emissions Testing.....	4
3. EEA Warns EU Must Step Up Efforts to Tackle Pollution	6
4. MEPs Push For Clampdown On Transport Emissions	6
5. France to Ban Sales of Petrol and Diesel Cars By 2040	7
6. Germany Steps Up Response to Diesel Pollution	8
7. EU Environment Agency Warns of 'Profound and Rapid' Arctic Changes	8
8. European Parliament Backs Further Greenhouse Gas Reductions.....	9
9. EU Proposes Truck Monitoring as Preparation for Emissions Standard	10
10. ICCT Issues Report on Potential Fuel Efficiency Technology for EU Trucks.....	11
11. Ford Partners With German Mail Carrier on Electric Delivery Van.....	11
12. EU Moving to Implement U.N. Ozone, Air Pollution Agreements	12
13. New Air Pollution Plan for Stuttgart Includes Diesel Car Bans	13
14. Germany Counters Diesel's Problems with National Task Force	14
15. German Diesel Makers Get Reprieve as Home States Reject Bans	14
16. Germany Extends Tax Breaks for Natural Gas Production	16
17. German Court Ruling for Daimler Bucks Trend Against Diesel.....	16
18. Germany to Test More Daimler Vehicles in Diesel Emissions Probe	17
19. Daimler Will Recall 3 Million Diesel Cars in Europe	18
20. ICCT Study Links Diesel Emissions to 107,600 Deaths.....	19
21. Germany Pulls Away From E-Cars to Invest in Green Alternatives.....	20
22. London's Iconic Black Cabs Go Electric; Bound for Amsterdam	21
23. UK Air Pollution Deadlier Than Across Half of Western Europe, Reveals WHO Report..	22
24. U.K. Releases Air Quality Plan, Omits Diesel Ban.....	23
25. U.K. Seeks to Lead World in Driverless and Electric Vehicles	23
26. London Mayor Seeks Pollution-Free Transport System by 2050	24
27. U.K.'s Drive to Urge Green Cars May Stall Due to Tax Policies.....	25
28. Italy in Trouble Over Alleged Fiat Chrysler Emission-Test Cheating	27
29. VW Emissions: Bosses Face Investigation Over Claims They Misled Investors	28

30.	Three Bosch Managers Targeted as German Diesel Probe Expands	29
31.	Ex-Audi Manager Arrested in Munich Is Said to Be Charged in U.S.	29
32.	CO2 Emissions From New Vans in Europe Continued To Fall In 2016 in the Lab	30
33.	Rise in Renewables Helps Emissions Drop 2.6% in EU	32
34.	EU Panel Backs ‘Stop-the-Clock’ Emissions Exemption for Airlines	32
NORTH AMERICA		33
35.	Trump to Withdraw U.S. from Paris Climate Accord	33
36.	Pruitt Touts Vehicle GHG Rules As ‘Progress’ On CO2 Despite Rollbacks, Hypocrisy? ..	35
37.	Volvo Electrification Plan May Boost Backers of EPA’s Vehicle GHG Rules.....	36
38.	ICCT Report Analyzes Diesel Technology Developments Since 2012 Efficiency Rule ...	37
39.	California Extends Landmark GHG Trading Program	38
40.	CARB Faces Host Of Decisions After Lawmakers Back Post-2020 GHG Bill	39
41.	Carper Weighs Bipartisan Letter Seeking Talks On 2030 Vehicle GHG Rules	39
42.	CEI Renews Call For Trump to Attack California’s Vehicle GHG Rule Power	40
43.	Several States Want Far Cleaner Diesel Trucks; Will EPA Start Rulemaking?	42
44.	Climate Spending Targeted in Trump Budget.....	42
45.	Lawmakers’ Hostility to EPA Budget Cuts Spurs Questions Over FY18 Funding.....	43
46.	House Report Maintains Voluntary Programs Despite Embrace of EPA Cuts.....	45
47.	House Panel’s Approval Of EPA Spending Bill Shows Disagreements Remain.....	47
48.	VW Judge Says He Will Approve 3-Liter Diesel Cheating Accord.....	48
49.	EPA Vehicle Emission Lab in Ann Arbor Gets High Marks For Cost Cutting.....	48
50.	Eyeing January Proposal, EPA Pushes Ahead With Aircraft GHG Standards	50
51.	EPA Proposes To Maintain 2018 RFS Targets But Lowers Cellulosic Volumes	51
52.	Canada Aligns Locomotive Pollution Rules with U.S. Standards	53
ASIA-PACIFIC		54
53.	New Beijing Chief Vows to Finally Win Fight Against Pollution	54
54.	China Warns Pollution-Plagued Cities to Step Up Enforcement	55
55.	Global Automakers Call On China to Ease "Impossible" Electric Car Rules.....	56
56.	China Likely to Extend Tax Break on Electric Cars, Auto Group Says	57
57.	Car Ownership Continues To Grow In China	57
58.	Australia to Phase Down Refrigerant Greenhouse Gases	58
59.	Australia Drives for Stricter Fuel Efficiency, Automakers Resist	59
60.	New Zealand Exempts Road Fees for Heavy Electric Vehicles	60
61.	Toyota, Nissan, Honda to Lead Japan’s Hydrogen Station Coalition	60
62.	Vietnam Air at ‘Danger Point’ Could Threaten Economic Revival	61
63.	India Slashing Tax on Electric Cars to Boost Sales	62
64.	Unabated Climate Change Would Bring Devastating Consequences to Asia	64
SOUTH AMERICA		66
65.	Brazil Projects Rapid Growth in Wind and Solar by 2026	66
GENERAL.....		66
66.	Glencore Says Electric Car Boom Is Coming Faster Than Expected.....	67
67.	Volvo Planning to Pull Plug on Gasoline Engines	67
68.	Electric Car Market Goes Zero to 2 Million in Five Years	68
69.	Potential Increased Electric Car Demand Has Broad Energy Implications.....	69
70.	Ship Efficiency Targets Met ‘Ten Years in Advance’	70
71.	IEA: Truck Efficiency Key to Curbing Oil Demand	70
72.	ICCT Issues Light-Duty Vehicle GHG and Fuel Economy Standards Update	71
73.	IMO Member States Urged To Back Action on Heavy Fuel Oil Risks	72
74.	China, EU Bolster Greening of Global Shipping to Curb Emissions	73
75.	Countries Outline Global Plan on Shipping Emissions.....	74
76.	Daily Emissions of Cruise Ships Same as One Million Cars	75

77. Carbon Prices Jump as Lawmakers Plan Tightening.....76

EUROPE

1. European WLTP and Third RDE Regulations Published

On 7 July 2017 the new World harmonized Light vehicle Test procedure (WLTP) Regulation was published in the Official Journal as Commission Regulation (EU) 2017/1151. This Regulation amends the implementing Euro 5&6 Regulation with the new WLTP-based Type I test. The procedure is largely based on the UN Global Technical Regulation (GTR) 15 on WLTP.

The European WLTP act enters into force on 27 July 2017.

On the same date, 7 July 2017, the third Real-Driving Emissions (RDE) act, Commission Regulation (EU) 2017/1154, was also published in the Official Journal as an amendment to the WLTP Regulation (EU) 2017/1151. It complements the first 2 RDE packages with provisions that take into account cold-start emissions, introduce the test protocol and limits for measuring real-world particle number (PN) emissions, take account of periodic regeneration events, and make sure that provisions exist for hybrid electric vehicles, light commercial vehicles and small volume manufacturers.

Linked to the prohibition to use defeat devices, the third RDE Regulation includes provisions on the 'Extended Documentation Package' on information to be disclosed by the OEM to the Type-Approval Authority on all Auxiliary Emissions Strategies (AES). The package remains strictly confidential and is kept by the granting type-approval authority for at least 10 years; it shall be transmitted to the Commission upon request.

The Conformity Factor on PN is set to 1.5, defined as $1 + 0.5$ for the PEMS measurement error margin. It applies to all vehicles with a Euro 6 PN limit, i.e. diesel and Gasoline Direct Injection vehicles, and is introduced for all new M and N1 class 1 vehicle type approvals from 1 September 2017 and for all new vehicles on 1 September 2018 (one year later to both dates for N1 class II and III and N2 vehicles).

The Regulation also sets minimum numbers of vehicle emissions types to be tested on the RDE procedure for cold- and hot-start tests. The larger the PEMS test family, the higher the number of types to be tested.

The 3rd RDE act also enters into force on 27 July 2017.

2. EU Parliament, Nations at Odds Over Vehicle Emissions Testing

The European Parliament and European Union national governments are at odds ahead of talks to finalize a reform of the 28-nation bloc's system for testing air pollution emissions from passenger vehicles.

The Council of the EU, which represents the bloc's national governments, would leave national authorities much of the responsibility for ensuring no repeat occurs of Volkswagen's rampant cheating on emissions tests for its diesel vehicles, according to position reached May 29. That's in contrast to the European Parliament, which backed a more centralized system in which the European Commission, the EU's executive arm, would have more power to fine automakers that violate the standards and to intervene in the compliance programs of EU countries.

Following the adoption of their respective positions, the council and parliament must negotiate over the final form of the regulation before an agreed text is put to ratifying votes.

Among the chief differences to be worked out is whether individual countries or the broader European Commission should take the lead on enforcement.

The council's favored approach would let national authorities' fine automakers up to 30,000 euros (\$33,500) per vehicle for violations. The commission would be able to step in and organize tests of vehicles if EU national authorities were seen to be failing in their market surveillance duties, but would not be able to impose fines in cases in which a national fine had already been levied. The European Parliament's proposal would give the EU's regulatory arm a more central role in enforcement.

Consumer advocates said the council's approach would water down the enforcement powers favored by the European Parliament.

"The commission will be prevented from issuing a penalty when a member state has already acted, even if the member state issues a completely insignificant penalty," the European Consumer Organization said in a May 29 statement.

While both the council and European Parliament agree that manufacturers should fund the emissions testing program, details of the payment system will need to be negotiated. The parliament advocated a system in which national authorities levy fees on manufacturers to cover testing costs and distribute the fees to test centers. That would avoid manufacturers directly paying the testing centers to ward off the appearance of impropriety. The council said instead that EU countries should be able to choose how they organize the financing of their market surveillance systems.

European Consumer Organization Director General Monique Goyens said the council's position was "a package of half-baked measures that risk turning the entire reform into a paper tiger."

The council agreed that EU countries should check the emissions of at least one in every 50,000 new vehicles they register each year, and that checks should verify that the emissions of vehicles in everyday driving conditions comply with legal standards. Currently, EU vehicle emissions tests take place in laboratories, producing levels of emissions that are often significantly exceeded in real driving conditions. About 14 million new vehicles were registered in the EU in 2015.

The European Commission, however, welcomed the council's agreed-on position and said a strengthened system for checking compliance of vehicles with emissions norms would complement changes to the way cars are tested in the EU. Tests that more accurately gauge emissions from cars in real driving conditions are being introduced.

EU Internal Market Commissioner Elzbieta Bienkowska said May 29 that the council's position was "a huge step in the right direction to the final legislation." The EU needed to act because nearly two years after the exposure of Volkswagen's emissions cheating in the U.S., "we continue to hear of new allegations, revelations and investigations," Bienkowska said.

Chris Cardona, economy minister of Malta, which chaired the Council of the EU until July 1, said the reform of the vehicle surveillance system would improve health and air quality. Once the new system is in place, "emission irregularities that occurred in the past will not happen again," he said.

No date has yet been agreed for the start of talks between council and parliament negotiators to finalize the market surveillance regulation.

3. EEA Warns EU Must Step Up Efforts to Tackle Pollution

Countries need to scale up efforts to tackle key pollutants “substantially” to avoid missing EU targets, the European Environment Agency (EEA) said recently. The latest projections submitted by member states showed that 22 countries will fail to meet at least one of the 2030 reduction goals set under the revised National Emission Ceilings (NEC) Directive. The law covers key pollutants such as nitrogen oxides (NOx), ammonia and sulfur dioxide.

Compliance with the law will require the EU as a whole to cut its NOx emissions by 42% between 2015 and 2030. However, six countries have recently failed to stay below their annual ceilings as road transport expanded faster than expected, the EEA said.

Austria exceeded its NOx cap by 28% in 2015, while Germany overshot its limit by 13%, the agency added.

EU-wide ammonia emissions saw their second year-on-year rise. The EEA linked the 1.7% increase between 2014 and 2015 to an expanding pig and poultry rearing sector. Emissions of the compound must drop by 16.4% by 2030 compared to 2015 for the EU to comply with the NEC Directive.

Germany, which is facing a legal challenge over illegally high ammonia levels, exceeded its 2015 limits by 38%. Five other countries, including Spain and Sweden, also failed to comply with the limits, according to the EEA.

Moreover, countries’ projections suggest that 14 member states currently expect to miss the new 2030 reduction targets for fine particulate matter. These include Germany, Poland, Italy and the UK.

The figures are the first to be reported by member states since the NEC Directive was amended last year.

Countries are required to transpose the law by July 2018 and must produce plans setting national emission-reduction goals by April 2019.

4. MEPs Push For Clampdown On Transport Emissions

The European Parliament’s environment committee has backed stricter air pollutant limits for cars and vans and CO2 tests under real-driving conditions. MEPs voted on a draft recommendation by Damiano Zoffoli, a member of the center-left S&D group, which proposed concrete measures to strengthen the European Commission’s vague strategy on low-emission mobility presented last year.

The committee backed a cross-party amendment calling for the creation of a new Euro 7 vehicle class by 2025, which would have to comply with tougher caps on pollutants such as nitrogen oxides (NOx). Diesel cars approved in line with the currently strictest Euro 6 standard have been found by regulators to vastly exceed EU limits.

MEPs also repeated demands first made in 2013 for the upcoming 2025 CO2 targets for cars and vans to be set at 68-78 g/km and 105-120 g/km, respectively. They also called for EU on-road CO2 checks for these light-duty vehicles, adding that the results of the new laboratory test known as WLTP will still fail to fully reflect real emissions.

Adding CO2 to the pollutants measured by the upcoming EU real-driving emissions (RDE) test has not been discussed by member state experts so far. But the Commission is considering proposing such on-road checks when it tables new standards for the greenhouse gas in November.

In July, talks to agree the new test will move on to discussing whether the gap allowed between legal and on-road NOx emissions needs to be revised. MEPs voted to remove these 'conformity factors' – currently set at 2.1 for 2017 and 1.5 for 2020 – by 2021.

The draft recommendation focused mostly on road transport emissions, with MEPs also backing cross-party calls for a revision of the Car Labelling Directive and public procurement rules for zero-emission buses.

However, lawmakers also had proposals for modes such as shipping as they reiterated previous demands for the EU emissions trading scheme to cover the sector's emissions in 2023 if the UN fails to deliver a "comparable system".

The recommendation will feed into the final position to be agreed by the transport committee in September. The text will then be presented for the full plenary vote in October.

5. France to Ban Sales of Petrol and Diesel Cars By 2040

The French government has pledged to end sales of petrol and diesel cars by 2040 as part of a plan to become carbon neutral by mid-century. French environment minister Nicolas Hulot recently presented a climate plan set to replace the country's current headline target for greenhouse gas emissions, which only requires a four-fold reduction between 1990 and 2050.

France must move "further and faster" if it is to deliver its contribution to the Paris Agreement on climate change, said Hulot.

The government intends to table legislative proposals in the autumn to outlaw new oil and gas drilling projects to end national production by 2040. It will also seek to increase the price of carbon with a 5-year plan and set higher taxes on hydrofluorocarbons, potent climate-warming gases.

The plan confirms President Emmanuel Macron's manifesto promise to shut down all coal power plants by 2022 and retains a target introduced by the previous government to source 32% of energy from renewables by 2030.

To combat air pollution, the government plans to build a coalition to lobby for an ambitious new Euro 7 standard to cut air pollutant emissions from cars and vans.

Infrastructure for alternative transport fuels including electricity and hydrogen will be promoted through a new fund for sustainable mobility, the plan indicates. It also foresees proposals by next March to halt imports of agricultural and forest commodities such as palm oil if they are found to drive deforestation.

Environmental lawyers at ClientEarth described the planned ban on conventional cars a “huge statement of intent”. But EU carmakers’ association ACEA cautioned that whether alternative modes reach a significant market share by 2040 will depend on factors outside the sector’s control, such as progress on charging infrastructure.

6. Germany Steps Up Response to Diesel Pollution

The German government has announced its plans to set up a new high-level group that will devise a response to diesel pollution and to roll out new real-driving emissions tests. The National Diesel Forum, created by the German environment and transport ministries, will be tasked with “agreeing on measures” against illegally-high nitrogen oxide (NOx) levels.

The group, which is set to meet on 2 August, will include representatives from other ministries, regional governments and industry. It will offer carmakers a chance to regain “lost trust” following the uncovering of widespread cheating in emissions tests, said environment minister Barbara Hendricks.

However, she did not clarify what measures will be considered for diesel vehicles, which are a major source of air pollution. Green groups have launched lawsuits in cities such as Munich and Stuttgart to initiate bans on polluting vehicles in central areas.

The German environment agency UBA warned recently that 57% of the country’s monitoring stations continue to record NO2 levels in breach of EU limits.

EU legal proceedings are ongoing over Germany’s failure to act against pollution and the use of defeat devices by carmakers. It has also been criticized for lobbying against stricter EU car-approval rules.

As part of the new strategy, the transport ministry will also create an institute to test NOx and CO2 emissions from around 70 passenger cars every year. The institute will focus on real-driving conditions tests to create a “more realistic” picture of emissions, with the help of representatives of ministries, municipalities and NGOs, according to the ministry. Results of its investigations will be published online to improve transparency.

However, campaigners at DUH slammed the plans to have carmakers fund the new institute. They proposed instead an industry-independent testing body similar to the US Environmental Protection Agency, which uncovered Volkswagen’s cheating in emissions tests back in 2015.

7. EU Environment Agency Warns of ‘Profound and Rapid’ Arctic Changes

The European Union should do more to relieve the pressures on the Arctic ecosystem or risk a breakdown of “the Arctic’s role in global climate regulation,” the European Environment Agency said June 15th. Specific measures for the 28-nation EU bloc to take could include initiatives to limit marine litter and black carbon, designation of more nature conservation areas in the European Arctic, phasing out the use of diesel generators in the Arctic in favor of renewable power, and designating low environmental impact shipping corridors, the agency said in a report.

The EU should also do more within international forums to promote protection of the Arctic environment and to ensure that economic exploitation of the Arctic’s resources does not damage the region’s ecosystems, the report said.

The current slowdown of investment in resource extraction in the Arctic, caused by low commodity prices, is a “window of opportunity” to introduce new more environmentally-friendly Arctic policies, the report added.

Global warming is leading to “profound and rapid changes” in the Arctic environment that could have worldwide consequences, the environment agency report said.

Of the eight countries with Arctic territory, Finland and Sweden are EU members, while Greenland is a territory of EU member Denmark.

8. European Parliament Backs Further Greenhouse Gas Reductions

On June 14th, the European Parliament voted in favor of binding greenhouse gas emission cuts for European Union countries through 2030, as lawmakers and EU officials lined up to criticize President Donald Trump over his decision to withdraw the U.S. from the Paris climate accord.

Sitting in Strasbourg, France, lawmakers backed a draft EU regulation that sets out cuts the 28 EU member countries must achieve by 2030 compared to 2005 from the parts of their economies, such as agriculture, construction and transport that are not covered by the EU emissions trading system (ETS). The regulation allocates cuts to countries depending on how wealthy they are, from minus 40 percent for Luxembourg and Sweden, to minus 2 percent for Romania and zero for Bulgaria.

If all cuts are achieved, the non-ETS parts of the EU economy would reduce their greenhouse gas emissions by 30 percent overall, compared to 2005. Combined with reductions from the ETS, which covers power generation and heavy industry, this would put the EU on track to curtail its emissions by 40 percent by 2030 compared to 1990.

Peter Liese, a German center-right lawmaker, said the European Parliament’s backing for the binding emissions reductions was a sign that the EU is serious about its pledge to the Paris Agreement. The EU would “take the lead in protecting our climate,” and intended to “turn Trump’s decision into an opportunity for Europe,” by boosting the low-carbon economy, Liese said.

The European Parliament approved the draft regulation on the emissions cuts, known as the effort-sharing regulation, in a 534 to 88 vote, with 56 abstentions.

The parliament’s adopted position on the effort-sharing regulation is provisional pending negotiations to finalize the law with the EU Council. Talks with the European Parliament to finalize the law cannot be started until the council position is in place.

EU lawmakers castigated Trump’s decision in a June 14 debate ahead of the effort-sharing vote. Julie Girling, a British European Parliament member, said the decision was “reckless, myopic and totally irresponsible,” while Manfred Weber, a German lawmaker who leads the European Parliament’s largest political grouping, the center-right European People’s Party, said “American selfishness, America first, is all about cutting off relations,” and Trump had made “a huge historical wrong step.”

European Commission president Jean-Claude Juncker, speaking at the European Parliament on June 14th, said the U.S. decision to opt out of the Green Climate Fund “leaves a major void,” and the EU would “work with third countries to mobilize public and private efforts” to address the shortfall. Juncker also reiterated a point made by several EU leaders that the Paris accord would

not be renegotiated. In pulling out of the accord, Trump said he would seek a renegotiation of the agreement.

EU Climate and Energy Commissioner Miguel Arias Canete said the EU would seek to bypass Trump to some extent by coordinating emission reduction measures with willing U.S. states and cities. Canete gave few details but said the EU would push for “big events in order to have a structured dialogue” on emissions cuts with states such as California, New York and Washington, which have said they will honor the U.S. pledge that President Barack Obama made to the Paris accord.

9. EU Proposes Truck Monitoring as Preparation for Emissions Standard

Manufacturers of trucks and other heavy-duty vehicles sold in the European Union would be required to monitor and report their vehicles’ carbon dioxide emissions and fuel economy performance, under a long-delayed proposal published by the European Commission on May 31st.

The commission announced in May 2014 that it would propose the measure in 2015, but then said “further analysis” was needed. The lack of a harmonized measure for truck carbon dioxide emissions puts the EU at odds with the U.S., which has had an emissions standard for heavy-duty vehicles since 2011.

Commission vice president for Energy Union, Maros Sefcovic, conceded that the EU was “the last major economy” that does not “have this very important sector covered.” Road freight was “developing in such a way that it is one of the main contributors of greenhouse gas emissions and air pollution in Europe,” and collecting data about truck emissions would give the commission the evidence it needed to propose the emissions standard, Sefcovic said.

The requirement for manufacturers to monitor and report their trucks’ emissions will be followed up in 2018 with a proposal for a carbon emissions standard for trucks, Sefcovic said.

The proposal on truck emissions was put forward as part of a package of transportation-related measures that the commission issued May 31. According to the proposal, truck manufacturers would be required from Jan. 1, 2019, to use a common methodology to calculate the emissions of vehicles above 7.5 metric tons. The data would be made public from 2020.

The plan moved “in the right direction, but the real test of the EU’s intentions will be the ambition of the CO2 standards” when they are proposed in 2018, the nongovernmental organization Transport & Environment said.

The EU already has fuel economy and carbon standards for passenger cars and light vans. The commission said it would make proposals within 12 months to update these standards for the post-2020 period.

In a related move on May 31st, the commission proposed amending a 1999 directive to update rules EU countries must follow when levying road use charges on heavy vehicles. Currently, 24 of the EU’s 28 member nations impose charges on trucks crossing their territory. It would require countries with road charges for trucks to introduce differentiated pricing based on trucks’ carbon emissions. This would “incentivize the use of the cleanest and most efficient” heavy vehicles, the commission said.

Both the proposed requirement on the monitoring of truck emissions and the road-charging directive require the approval of the European Parliament and the EU Council.

10. ICCT Issues Report on Potential Fuel Efficiency Technology for EU Trucks

Heavy-duty vehicles produce about a quarter of all carbon dioxide (CO₂) emissions from road transport in the European Union (EU), and some 5% of the EU's total greenhouse gas emissions. Their share is growing, as emissions from cars and vans decline in response to increasingly stringent CO₂ standards for those vehicles.

The technical research described in this report¹ informs stakeholders on the current status of fuel efficiency performance and the technological potential for improving the fuel efficiency of new heavy-duty freight-hauling vehicles in the EU in the 2020–2030 timeframe. The analysis focuses on two vehicle segments on either end of the freight hauling operational spectrum: long-haul tractor-trailers and urban rigid delivery trucks.

The key findings of this report include:

- Compared to the baseline tractor-trailer, available efficiency technologies can reduce fuel use by 27% in long haul operation. This amounts to a reduction in fuel consumption from the tractor-trailer baseline of 33.1 L/100km to 24.0 L/100km. The corresponding average annual reduction is 3.1% per year from 2015 to 2025.
- Compared to the baseline tractor-trailer, well-known but not yet widely commercialized technologies can achieve a 43% fuel consumption reduction in long haul operation by 2030. This would require an average annual reduction from 2015 to 2030 of 3.6%, reducing the fuel consumption of new tractor-trailers to 18.9 L/100km by 2030.
- The application of available technologies to the baseline 12-tonne delivery truck results in a 23% reduction in fuel consumption. Starting from a baseline fuel consumption of 21.4 L/100km, mid-term technology would reduce fuel consumption to 16.5 L/100km. The corresponding average annual reduction is 2.6% per year from 2015 to 2025.
- The long-term package consists mostly of technologies that are not yet commercialized. The exception is the hybrid-powertrain. Although full hybrid delivery trucks are currently available on the market, we opted to include this technology in the longer-term package due to its compatibility with advanced road load reduction technologies. The long-term package results in a 43% reduction in fuel consumption from the 2015 baseline, an annual improvement of around 3.6% per year from 2015–2030. This amounts to a reduction in fuel consumption from a baseline of 21.4 L/100km to 12.1 L/100km by 2030.

11. Ford Partners With German Mail Carrier on Electric Delivery Van

Ford Motor Co. is teaming up with Deutsche Post AG on an electric delivery van, as the German mail carrier secures a big-name partner to advance its portfolio of battery-powered vehicles.

The new vehicle, bigger than Deutsche Post's current lineup of no-frills electric vans and based on the Ford Transit, will be used to deliver packages, the companies said in a joint statement. Production will start in July, with the goal of assembling at least 2,500 vehicles by the end of 2018. That would make it Europe's biggest venture in that segment, they said.

¹ Fuel efficiency technology in European heavy-duty vehicles: Baseline and potential for the 2020–2030 timeframe, Published Sun, 2017.07.16 | By Oscar Delgado, Felipe Rodríguez, and Rachel Muncrief

The German postal company, which also owns the DHL shipping service, has made inroads into the electric-vehicle market by developing a bare-bones model with no passenger seat, air-conditioning, or radio—and a top speed of less than 50 miles per hour. The mail carrier plans to electrify its global fleet of 92,000 vans in a shift away from diesel, which is under growing scrutiny due to health concerns.

The mail carrier's electric vehicles will be increasingly deployed in rural areas as battery capabilities improve, and Deutsche Post plans to ramp up production to 20,000 vehicles annually. The company now operates 2,500 of the vans.

12. EU Moving to Implement U.N. Ozone, Air Pollution Agreements

On June 22nd, the European Parliament's environment committee waved through draft European Union decisions to ratify international agreements on ozone-depleting substances and transboundary air pollution. The committee approved the draft EU decisions on the Kigali Amendment to the United Nations Montreal Protocol on Substances That Deplete the Ozone Layer and updates to the Gothenburg Protocol to the U.N. Convention on Long-Range Transboundary Air Pollution as a formality. The committee approved the Kigali Amendment by 55–0, with one abstention, and the Gothenburg update by 57–0, with one abstention.

The measures required under the U.N. agreements have already been written into EU law. The Kigali Amendment requires the phase down of hydrofluorocarbons, gases that are used in refrigeration and air conditioning systems but have high global-warming potential. Its provisions apply in the EU via the 2014 EU F-Gas Regulation ((EU) No 517/2014).

The updates to the Gothenburg Protocol, agreed to at the international level in 2012, have been incorporated into EU law through the National Emissions Ceiling Directive ((EU) 2016/2284), which caps emissions from EU countries of ammonia, fine particles, nitrogen oxides, non-methane volatile organic compounds, and sulfur dioxide, which are pollutants that cause acid rain.

The EU is ready to ratify the Kigali Amendment that adds hydrofluorocarbons (HFCs) to the list of substances controlled under the Montreal Protocol after the EU Council endorsed the deal. EU agriculture ministers also formally backed an amendment strengthening the 1999 Gothenburg Protocol to include tighter limits on pollutants such as sulfur dioxide, nitrogen oxides and volatile organic compounds while adding controls for particulate matter.

The Kigali amendment, agreed by 197 countries in the Rwandan capital in October 2016, was a response to the increasing use of HFCs – potent greenhouse gases – as replacements for CFCs and other ozone-depleting substances being phased out under the 1989 Montreal Protocol.

“HFCs are thousands of times more harmful to the climate than carbon dioxide,” said Siim Kiisler, environment minister of the current EU Council presidency holder Estonia. He added that it is an “issue where international cooperation is crucial”.

With the European Parliament having backed the deal on HFCs at a plenary session on 5 July, the EU Council agreement paves the way for formal ratification of the amendment, which the UN estimates will avert up to 0.5°C warming by the end of the century.

The Kigali Amendment is due to enter into force on 1 January 2019 – subject to ratification by at least 20 states or regional economic integration organizations – with developed countries

committed to starting the phase-down process immediately. The aim is to cut the production and use of HFCs by more than 80% over 30 years.

The EU's ratification of the 2012 revision of the Gothenburg Protocol has been on hold since 2013 pending the revision of the National Emission Ceilings Directive, which was finalized in December.

The EU began phasing out the use of HFCs in 2015 under a regulation adopted two years ahead of the global deal, which Council noted would now need to be reviewed to ensure compliance with the Kigali Amendment beyond 2030.

The European Commission recently launched a review of the 2010 Regulation on ozone depleting substances, through which the EU complies with its Montreal Protocol undertakings.

13. New Air Pollution Plan for Stuttgart Includes Diesel Car Bans

The German state of Baden-Württemberg has announced an air-pollution control plan for the city of Stuttgart that includes conditional driving bans on older models of diesel-engine vehicles within city limits, the state Ministry for Transportation said. The plan would impose driving bans on older diesel-engine vehicles that do not comply with the latest European standards for vehicle emissions established in 2016 (Euro-6). It is slated to go into effect Aug. 31.

The ban would be in effect only on days when particulate matter in the air exceeds acceptable levels—above 50 micrograms per cubic meter as set by the European Union. Thirty-five such days were recorded between January and April, according to government statistics.

The air pollution plan also calls for expanding public transportation, promoting electric cars and retrofitting public vehicles such as police cars and ambulances with more environmentally friendly technology to reduce pollution levels. Public service vehicles would be exempt from the diesel-engine ban, according to the plan.

The state of Baden-Württemberg, in southwestern Germany, is home to Bosch, which makes diesel systems, and Daimler, which makes engines. According to government statistics, diesel vehicles account for one-third of all vehicles in Germany.

While only a few days old, the plan is already drawing criticism from environmental organizations.

A sweeping ban on all diesel engines is the only way to reduce stifling levels of pollution within Stuttgart's city limits before Jan. 1, 2018, the deadline set by the state's courts in 2016 for improving air quality in Stuttgart in line European standards, environmental organizations said.

Euro-6 diesel engine vehicles, which wouldn't be affected by the ban, still register nitrogen dioxide levels well above the 80 milligram per kilometer emissions level currently in place according to Deutsche Umwelthilfe's own street tests on such vehicles.

Despite legislation that obliges member states to adhere to certain EU standards on air pollution levels, air quality remains a systemic problem for most member countries. In February, the European Commission threatened legal action against Germany and four other member states if they didn't implement programs to curb nitrogen dioxide levels in their cities. The commission noted that air quality standards are routinely exceeded by 23 of 28 member states and more than 130 cities across Europe.

Deutsche Umwelthilfe alone has outstanding lawsuits against cities in every federal state in Germany to implement such plans to curb pollution caused from vehicle emissions, a spokeswoman with the organization confirmed.

14. Germany Counters Diesel's Problems with National Task Force

Germany is seeking to counter concerns over the harmful emissions from diesel vehicles by bringing together government and auto-industry experts to devise ways to clean up the technology, which supports thousands of jobs in the country.

The first meeting of the National Diesel Forum will take place on Aug. 2, a little less than two years since Volkswagen AG's emissions-cheating scandal led to a backlash. Since the German automaker admitted to rigging 11 million vehicles worldwide to circumvent regulatory tests, more cities are mulling bans on diesel vehicles and European consumers are gradually turning away from the technology.

"The task of this national forum is to bundle the discussion on optimizing diesel vehicles," Transport Minister Alexander Dobrindt said in a joint statement with the German Environment Ministry. "We're aiming to find workable measures to cut emissions from diesel cars."

Diesel technology plays a major role in the German auto industry, with the models accounting for about 46 percent of car sales in the country last year. At Robert Bosch GmbH, the world's biggest car-parts supplier, about 50,000 jobs are related to diesel, with many more at Volkswagen and other automakers.

That importance hasn't stopped Germany from putting pressure on automakers to clean up their vehicles in the aftermath of the VW scandal. Last year, the Transport Ministry prodded manufacturers including VW, Audi and Mercedes-Benz to recall 630,000 cars that pushed the limits of emissions regulations. Government officials and carmakers remain in talks to upgrade older diesel vehicles to pollute less on the road.

Munich and Stuttgart—the hometowns of BMW AG and Mercedes parent Daimler AG, respectively—are among a growing list of municipalities that are weighing measures to restrict the use of diesel vehicles to reduce health risks caused by their exhaust. The debate is also turning off European consumers, with buying rates slipping.

15. German Diesel Makers Get Reprieve as Home States Reject Bans

Diesel engines received a reprieve in Germany after the home states of BMW AG, Daimler AG and Audi signaled they'd allow upgrades of older motors instead of supporting driving bans that some cities are pushing to cut air pollution.

The state government of Bavaria—where BMW and Audi are based—said July 18 that it agreed to a voluntary recall with carmakers in an effort to avoid bans of diesel-powered vehicles in its cities, of which Munich is the biggest. Baden-Wuerttemberg, home to Mercedes-Benz parent Daimler, indicated it would be open to a similar solution.

Auto manufacturers have been lobbying against the prohibitions and offered to pay for the fixes, which could affect as many as 13 million vehicles. Weighing in with their own views are state and federal authorities, as well as German courts.

Germany is wrestling over the future of diesel autos, with possible driving bans in some localities clashing with an industry that employs tens of thousands to produce vehicles that use the technology. While states appear willing to strike deals that allow carmakers to upgrade older models, city governments and courts are likely to continue pushing back and seek bans.

Efforts by Munich, where BMW is based, and Daimler's hometown of Stuttgart come as some urban areas fail European Union air-quality standards and local governments worry about the impact of nitrogen oxide—of which diesel cars are a major source—on the health of their residents. The technology has been under fire especially since Volkswagen AG's emissions cheating became public almost two years ago, a scandal that's also enmeshed its Audi luxury-auto brand.

Of several municipalities that have deliberated on introducing restrictions, the northern German city of Hamburg is the only one that has succeeded in prohibiting older diesel cars from certain streets.

In France, the government has gone a step farther, outlining plans two weeks ago to end the sale of gasoline- and diesel-powered vehicles by 2040 in a bid to become a carbon-neutral nation.

Diesel bans threaten to upend an industry already challenged by the costs of developing electric vehicles. BMW Chief Executive Officer Harald Krueger contends the shift to cleaner cars isn't possible without keeping the fuel, which burns more efficiently than gasoline, as part of an interim step before combustion motors are eliminated.

In particular, diesel technology plays a major role in Germany, where the models accounted for about 46 percent of sales last year. It also supports thousands of jobs. At Robert Bosch GmbH, the world's biggest car-parts supplier, about 50,000 positions are linked to diesel, with many more employed at Volkswagen and other auto producers.

With a federal election just over two months away, German Transport Minister Alexander Dobrindt has come out against vehicle bans, saying they're an ineffective tool for reducing pollution. Dobrindt has organized a gathering of government and industry executives on Aug. 2 to consider options for updating older diesels.

"Driving bans can only be a means of last resort because they limit the mobility of people," Hubertus Heil—general secretary of the Social Democrats, Chancellor Angela Merkel's junior coalition partner—said July 17 in Berlin. "The solution must be to organize mobility in Germany in another way. So it is good that all parties involved sit down together and develop a concept for the future."

Even as politicians get behind car fixes, there's the risk of judicially-ordered restrictions. Stuttgart's administrative court will hold a public hearing on a complaint seeking to ban all diesel cars from driving into the city, which is Baden-Wuerttemberg's capital. Stuttgart, built in a valley, has for many years failed air pollution tests. In Munich, a court compelled the city in March to prepare diesel bans to bring down levels of nitrogen oxide.

Last year, the federal Transport Ministry prodded manufacturers including VW, Audi and Mercedes-Benz to recall 630,000 cars that pushed the limits of emissions regulations. Industry leaders contend that the 13 million-car estimate for new fixes is too high.

How that would work and who will pay for it will be discussed at the task force meeting on Aug. 2. BMW and Audi said last month more than 50 percent of their diesel cars that meet Euro-5 emissions standards could be upgraded, and on Tuesday, Bavaria said the carmakers had agreed to bear the cost of the recalls.

16. Germany Extends Tax Breaks for Natural Gas Production

A plan to extend significant tax breaks for production of both natural gas and liquefied petroleum gas through 2023 was approved July 7 by German lawmakers, who deemed the measure necessary for the country's problematic transportation sector.

The upper house of the German Parliament, the Bundesrat, passed the Second Law to Amend the Energy and Electricity Tax, which extends tax breaks for both liquefied and compressed natural gas, as well as liquefied petroleum gas that would have otherwise ended Jan. 1, 2019.

Now, the 56 percent break on energy taxes on all types of natural gas will continue through Dec. 31, 2023, with deductions gradually being reduced each year thereafter until 2026, according to the bill.

The 56 percent tax reduction for liquefied petroleum gas also has been extended. Tax reductions for this type of fuel, however, will gradually decrease beginning in 2019 and this type of fuel will be subject to full taxation beginning in 2023.

The German president must sign off on the bill before it becomes law, usually a pro forma procedure.

Lengthening this tax scheme provides the natural gas industry with the market stability it needs to replace dirtier gasoline, industry representatives told reporters. "There are clear advantages for the environment," Michael Oppermann, a spokesman for Zukunft ERDGAS, a natural gas industry association, told reporters. "Natural gas burns with much lower emissions due to its natural composition."

Natural gas vehicles emit 95 percent less nitrogen oxide and 23 percent less carbon dioxide than diesel vehicles, which could help to combat persistent environmental issues in Germany's transportation sector, Oppermann added.

Natural gas vehicles, however, comprise only a fraction of the auto market in Germany—about 100,000 vehicles compared to more than 45 million cars on national roads overall, according to information provided by Green Budget Germany, a Berlin-based environmental advocacy group.

With gasoline and diesel still dominating the market—making up 65.5 and 32.9 percent of all personal vehicles in Germany respectively, according to the Federal Office of Motor Vehicles—it is unlikely that the extension of tax breaks on natural gas will have significant impact on the market or the environment, according to analysts. However, providing a leg up for natural gas vehicles could mean that natural gas will become a clean bridging fuel for the sector while renewable technologies find their footing, especially considering current biogas fueling stations can be easily converted to service natural gas vehicles, energy analysts said.

17. German Court Ruling for Daimler Bucks Trend Against Diesel

German auto giant Daimler didn't misrepresent the effectiveness of pollution control technology in one of its Mercedes diesel vehicles, the Regional Court of Stuttgart ruled on June 29th. Berlin-based environmental nonprofit Deutsche Umwelthilfe (DUH) alleged in its February 2016 lawsuit that Daimler overstated emissions efficiency on its Mercedes C-Class BlueTEC 220 CDi model in advertisements. According to the organization, the standard exhaust purification system on the car didn't reduce nitrogen oxide emissions by up to 90 percent when compared to diesel engines not outfitted with the software.

But the court dismissed that claim, ruling in favor of Daimler's argument that context of the advertisement was a comparison between diesel vehicles in its own fleet, rather than all diesel vehicles on the market.

In its claim, DUH cited an independent study conducted by the nonprofit Netherlands Organization for Applied Scientific Research (TNO) to dispute Daimler's efficiency claim.

TNO laboratory tests verified figures the automaker cited in its advertisements. But road tests TNO conducted during days when temperatures ranged between 7 and 10 degrees Celsius (45 to 50 degrees Fahrenheit) yielded nitrogen oxide emissions that were about 28 times higher than the acceptable limit of 0.08 grams per kilometer for Euro 6 class vehicles, according DUH. The Euro 6 standard is currently the most stringent emissions class for new vehicles in Europe.

Still, the court found no grounds for ruling Daimler and its subsidiary Mercedes misrepresented the efficacy of its technology because both the government-funded and private laboratory tests affirmed the advertisement's claim, as well as the context of the claim—a Mercedes-to-Mercedes comparison, rather than a comparison between Mercedes' vehicles and all other diesel engine vehicles.

The court's ruling bucks the anti-diesel trend currently shaking the auto industry in Germany.

In March, the Bavarian High Administrative Court upheld a 2012 decision instructing authorities in Munich to begin drafting plans to institute a partial driving ban on diesel vehicles due to a DUH suit. Meanwhile in Düsseldorf, regional courts ordered city officials to begin drafting similar regulations in September 2016. In Stuttgart, partial driving bans of diesel engines will begin taking effect in 2018 following a lawsuit by DUH.

18. Germany to Test More Daimler Vehicles in Diesel Emissions Probe

The German government said it will test additional vehicles made by Daimler AG, a day after company executives were summoned to Berlin for an extraordinary meeting about the ongoing probe into the carmaker's diesel emissions.

The Federal Motor Transport Authority, or KBA, which also is looking into potential emissions violations at other carmakers, will oversee the tests, Transport Ministry spokesman Ingo Strater told reporters in Berlin July 14. On July 13, details emerged that two engines used in Daimler's Mercedes-Benz cars were being scrutinized by Stuttgart prosecutors as part of an investigation they opened in March.

"The KBA is testing vehicles from Daimler, just as it has done with other manufacturers in the past," Strater said.

Germany's scrutiny of Daimler deepens concerns that defeat devices used to cheat on emissions tests were used more widely than initially thought. Volkswagen in September 2015 was the first manufacturer to be caught using the technology in 11 million cars. At Daimler, German prosecutors are reportedly focused on two diesel motors built from 2008 to 2016 that are used across Mercedes's product lineup.

Officials from the Transport Ministry on July 13 met with Daimler representatives, including the head of technology development Ola Kaellenius, who reiterated that the company complied with existing rules, according to a ministry statement. "For us, the discussion was a continuation of the constructive dialogue with the KBA," Daimler said in a statement, declining to say what was discussed. "Of course we will continue to work constructively with the authorities."

As part of its efforts to clear up mounting questions about the reliability of emissions controls in diesel cars, the Transport Ministry is due to meet manufacturers on Aug. 2 to discuss steps aimed at cleaning up older vehicles that use diesel technology, including software updates.

KBA has also looked into potential emissions violations at Volkswagen AG's Audi, Fiat Chrysler Automobiles NV and General Motors Co.'s Opel.

19. Daimler Will Recall 3 Million Diesel Cars in Europe

Daimler said its management board had approved measures to cut diesel pollution including an investment of 220 million euros (\$255 million) to update more than three million Mercedes-Benz diesel engine cars in Europe. The steps are being taken to cut pollution of nitrogen oxide emissions, which have been blamed for causing respiratory disease, Daimler said.

"The public debate about diesel engines is creating uncertainty," CEO Dieter Zetsche said in a statement. "We have therefore decided on additional measures to reassure drivers of diesel cars and to strengthen confidence in diesel technology."

The service actions involve no costs for the customers and the implementation of the measures will be starting in the next weeks, Daimler said. The measures to be taken for nearly all EU5 and EU6 vehicles in Europe will be carried out in close cooperation with the German regulatory authorities, the company said.

Daimler further said it would roll out its new four-cylinder OM 654 diesel engine, first launched in the new E class in 2016, across its entire model portfolio.

The recall comes after German lawmakers last week summoned Mercedes-Benz executives to question them about emissions. At the time the carmaker agreed with the Transport Ministry to undergo another round of emissions tests.

In May, 23 prosecutors and around 230 staff, including police and state criminal authorities, searched Daimler sites in Germany following allegations of false advertising and the possible manipulation of exhaust gas treatment systems in diesel cars.

Daimler has said its vehicles are road legal but also warned investors in its quarterly report that steps by U.S. authorities to investigate "functionalities," including some which it said were common in diesel vehicles, could lead to significant penalties and vehicle recalls.

20. ICCT Study Links Diesel Emissions to 107,600 Deaths

Diesel's image, already tarnished by Volkswagen AG's emissions-cheating scandal and its association with urban smog, was dealt another blow as a study linked a gas in the fuel's exhaust to the premature deaths of 107,600 people globally in 2015.

The health impact of the exhaust from diesel-powered cars, trucks and buses would have been less severe if the vehicles operated within regulatory limits, but a growing gap between official data and real-world results meant that "excess" nitrogen oxides emissions contributed to about 38,000 of the deaths, according to a report by the International Council on Clean Transportation, the organization whose testing uncovered VW's cheating.

More than half of European Union countries "report levels of nitrogen dioxide air pollution higher than the EU's legal limits," said Martin Adams, who heads air pollution, transport and noise for the European Environment Agency. "This new study helps raise awareness of the significant health impacts" of road traffic.

The ICCT estimates that 28,500 deaths in EU nations were tied to nitrogen oxides emissions. The council, which examined 11 major global diesel markets, said vehicles' NOx output worldwide exceed regulatory limits by about one-third.

The study, published in science journal Nature, highlights the stakes involved as authorities who once promoted diesel as a better-burning fuel that produced less carbon dioxide reconsider policies as other pollution concerns emerge. Across the EU, about half the cars on the road run on diesel, thanks in part to tax incentives that made the fuel cheaper to buy. London and Paris are among localities tightening restrictions on diesel vehicles.

"The study underscores our viewpoint that the actual NOx emissions from diesel vehicles, particularly cars, must be drastically cut back," Germany's environment ministry said in a statement. EU regulators are now "on the right path" toward coming up with tests for real-world conditions.

The shift in official attitudes toward diesel is part of a backlash after Volkswagen admitted in September 2015 to rigging 11 million vehicles worldwide to cheat on emissions tests. While the engines are more fuel-efficient than their gasoline counterparts, they require additional exhaust controls to treat harmful pollutants that can cause smog and cancer. Research commissioned by the ICCT led to the revelation that the German carmaker had installed software that turned the controls on only during official testing.

European diesel-vehicle sales have started dropping as concerns that pollutants from the fuel outweigh the benefits of its lower carbon dioxide emissions. Cities' plans to ban older diesels have prompted car manufacturers to increasingly look at producing more all-electric models to fulfill regulations on cutting their lineups' emissions.

In April, diesel's share of new car sales was 46.1 percent in Western Europe, a drop of 3.8 percentage points from a year earlier and the fifth month in a row that the decline exceeded 3.5 points, according to a report from Barclays Plc.

"The consequences of excess diesel NOx emissions for public health are striking," said Susan Anenberg, co-lead author of the study. "In Europe, the ozone mortality burden each year would be 10 percent lower if diesel vehicle NOx emissions were in line with certification limits."

21. Germany Pulls Away From E-Cars to Invest in Green Alternatives

Chancellor Angela Merkel said the next phase of Germany's green-energy transition will focus in part on cleaning up and bolstering the nation's transportation sector. But with billions of euros of investments in research and development still producing anemic electric-vehicle sales, Germany is pursuing alternative methods of promoting green mobility.

This year, the government is adding an extra 40 million euros (\$43.4 million) to its annual budget to create more bike paths along federal roads and waterways, Germany's Ministry for Environment told reporters that It also is earmarking 25 million euros (\$27.2 million) for the construction of bike highways—long-distance stretches of uninterrupted bike paths for high-speed commuter traffic—through major cities.

In addition, the government is investing more in innovative green public transportation, such as electric buses tethered to overhead power lines that wouldn't require the infrastructural overhaul needed to charge electric cars.

Merkel is even looking at ways to better support car-sharing programs.

This strategic shift comes as Germany's efforts to bolster e-cars have largely failed. Despite the generous subsidies and tax breaks for electric and hybrid vehicles that have been in place for years, only about 34,000 electric vehicles were on German roads as of January, according to the German Federal Motor Transport Authority.

Transportation analysts said the alternatives could help Germany meet its goals of reducing greenhouse emissions by 40 percent by 2020 and between 80 and 95 percent by 2050.

Merkel has set high expectations for electric vehicles for years. In 2011, her government introduced the sustainable and climate-friendly National Platform for Electric Mobility, and set the goal to have 1 million e-cars on German streets by 2020 and as many as 6 million up and running by 2030. The national platform also included billions of euros in tax breaks for electric and hybrid vehicles, government subsidies for those purchasing new electric vehicles, and investments in new e-mobility technology.

But combustion-engine vehicles still dominate and emissions from the transportation sector continue to make up roughly 20 percent of the country's carbon dioxide output, according to government figures.

Analysts point out that neither politicians nor the automobile industry fully committed to the national platform. Specifically, creating the needed infrastructure for electric and hybrid vehicles, such as charging stations, just hasn't been a priority. Consequently, consumers have shied away from buying of electric vehicles.

Currently, the country has only 7,407 charging stations for electric and hybrid vehicles—a fraction of the benchmark set for 2020. Germany's upper house of Parliament wants to help double the number of electric-car charging stations available to drivers.

The Bundesrat passed an ordinance May 12 that will implement a 2014 European Union directive (2014/94/EU) on sustainable mobility by eliminating the need for contracts with German energy companies that own and operate charging stations. Previously, only those with an established

contract with an energy provider were authorized to access and use charging stations owned by a particular provider. Now providers must offer drivers a contract-less option for charging e-cars in buildings and roadsides.

Currently, about half of all stations in Germany are public and the rest owned by energy companies, according to statistics from the German Association of Energy & Water Industries. Still, energy providers will likely hike the prices for using their charging stations now that they will be available for public use.

The ordinance will go into effect after it's reviewed and approved by Germany's Ministry for Economy and Energy and Chancellor Angela Merkel.

22. London's Iconic Black Cabs Go Electric; Bound for Amsterdam

Hundreds of London's black cabs will start appearing on the roads of Amsterdam next year, powered by batteries instead of diesel fuel, marking the first international sale for Geely Automobile Holdings Ltd.'s new electric taxi.

Rotterdam Mobility Center agreed a 225-vehicle deal for the new all-electric hackney cab that will meet new pollution rules in the Dutch capital. It will be delivered from a factory near Coventry, England, in the first quarter of 2018, the companies said.

The sale marks a new phase for London Taxi Co., which is planning to expand its reach beyond the U.K. with its new battery powered model called the TX that was designed in Barcelona and unveiled July 11.

From September, LTC will be renamed London EV Co. to reflect the 325 million-pound (\$419 million) electrification investment by its Chinese owner Geely. That's paid for new manufacturing equipment for taxis and vans that will meet pollution rules being introduced in London and other cities worldwide.

The cab's trademark turning circle and roomy interior suits the narrow streets of Amsterdam as well as requirements for wheelchair users, said Albert Donlou, director of services at RMC, in an interview.

Designers were keen to ensure the "face" of the new cab conveyed a message that the driver was reliable and serious yet friendly, and was neither too cute nor too aggressive or retro, said David Ancona, managing director of Geely Design Barcelona. The interior can fit six passengers compared to five of the current model and features a large sunroof, as well as a large touch screen for driver navigation.

Geely wants to tap into the global market for low emissions vehicles. More than half of new cars sold globally will come with a plug by 2040, led by cities in Europe, China and the U.S., according to Bloomberg New Energy Finance.

"The launch of LEVC marks Britain's leadership as a first mover in creating the world's only dedicated electric vehicle company for the urban commercial market," Chief Executive Officer Chris Gubbey said a statement July 11.

LEVC unveiled the first version of the new cab, named TX. It retains key elements of the classic model, including doors that open backwards to 90 degree angles and will be powered by a battery

and a small gasoline generator, known as a range extender. That will allow drivers to travel from London to Edinburgh, or even Paris, without needing to refuel, according to the statement.

The price tag of the new TX model will be announced on Aug. 1, when order books open for individual drivers, a spokesman for LEVC said. The new taxi will go on sale in London in the fourth quarter, and in the first quarter of 2018 in the rest of the world. Steep declines in the cost of batteries that account for about a third of the cost of the vehicle stopped the company from determining the price earlier.

London's Mayor Sadiq Khan decreed that all new taxis in the city need to be capable of operating with zero emissions from 2018, either by pure electric or hybrid motors. As well as targeting London's 23,000 diesel-powered taxis, Geely has toured European cities from Paris to Berlin, seeking to drum up interest for a potential export market.

23. UK Air Pollution Deadlier Than Across Half of Western Europe, Reveals WHO Report

Air pollution in the UK is more deadly than in about half of Western Europe, according to a major report by the World Health Organization (WHO) into how people die. The report revealed that the causes of nearly half of the estimated 56 million deaths worldwide in 2015 had been recorded – a major step towards trying to reduce them.

About 830 women die every day due to complications in pregnancy or childbirth; 43 out of every 1,000 children born die before they reach the age of five; 800,000 people took their own lives; and 1.25 million died in road traffic collisions, the leading cause of death for those aged 15 to 29.

The mortality rate attributed to air pollution in homes and outside for the UK was 25.7 per 100,000, the 15th worst rate in Europe, according to the WHO report.

By comparison, Sweden's air pollution death rate, one of the lowest in the world, was just 0.4 per 100,000, followed by Finland (6) and Iceland (6.4). The UK's air is also more deadly than in Spain (14.7), France (17.2) and the Netherlands (24).

Dr Penny Woods, chief executive of the British Lung Foundation, said: "This report confirms that the deaths attributable to air pollution are higher in the UK than for many other comparable European countries, including France and Spain.

"In the UK, air pollution is a public health crisis hitting our most vulnerable the hardest – our children, people with a lung condition and the elderly.

She said it was "deeply tragic" that millions of lives ended prematurely worldwide because "the air we breathe is dirty and polluted". "Yet, we are in the fortunate position of having the technology and resources to fix this problem. It's time to use what we have to sort this problem out as a matter of urgency and clean up our filthy, poisonous air," Dr Woods said.

She said the next Government should bring in a new Clean Air Act to "protect the nation's lung health".

Dr Woods added that, while progress was being made in high-income countries to reduce deaths from cardiovascular disease and cancer, those caused by lung disease had "remained tragically constant". "Our report last year found that this couldn't be truer for us in the UK, where one person

dies from lung disease every five minutes – a statistic that has remained the same for a decade,” she said.

24. U.K. Releases Air Quality Plan, Omits Diesel Ban

The U.K. published air quality plans on May 5th to address repeated breaches of air pollution limits for nitrogen dioxide, which cause an estimated 40,000 premature deaths a year.

The Department for Environment, Food and Rural Affairs (Defra) unveiled its plans only after it failed an appeal at the U.K. High Court at the end of April to postpone any publication until after the June 8 general election.

Defra proposed creating clean air zones in larger cities and towns within three years as the “most effective way” of reducing nitrogen dioxide levels “in the shortest possible time,” it said in a technical document to support the consultation.

Local government authorities would be the main responsible entities by exploring a range of options including encouraging local transportation operators to buy ultra-low-emission vehicles, ensuring adequate charging stations for electric cars and promoting public transportation, cycling, walking and carpooling.

Environmental groups slammed the proposals for failing to include a plan to scrap or severely limit diesel cars, the main source of nitrogen dioxide emissions, and for not forcing a ban on the most polluting vehicles in towns and cities.

Following tax incentives in the early 2000s, diesel cars grew from 3.2 million in 2000 to 8.2 million in 2010 in the U.K., while the number of diesel vans grew from 1.8 million to 3 million over the same period, Defra said.

James Thornton, CEO of environmental lawyers ClientEarth, which pushed the court action, said that “on the face of it,” the government’s proposal “looks much weaker than we had hoped for.”

The new government will have to publish a final air quality plan by the end of July.

The U.K. is one of five countries—including Germany, France, Spain and Italy—that has repeatedly violated EU legislation on ambient air quality (Directive 2008/50/EC) that sets limit values for air pollutants, including nitrogen dioxide, the European Commission warned in February. Sixteen air quality zones in the U.K. are in breach of the directive, including London, Birmingham, Leeds and Glasgow, the commission said.

25. U.K. Seeks to Lead World in Driverless and Electric Vehicles

The U.K. government plans to invest more than 800 million pounds (\$1 billion) in new driverless and zero-emission vehicle technology as it seeks to boost its economy while leaving the European Union.

Investment in research and new recharging infrastructure is intended to make Britain a “leader” in electric and autonomous vehicles, Queen Elizabeth II said in a June 21 speech marking the state opening of Parliament in London. The technology may be worth 28 billion pounds to the economy by 2035, the government estimates.

To deliver on that goal, the government will:

- extend mandatory vehicle insurance to cover the use of automated vehicles;
- set a target for almost every car and van to be zero emission by 2050;
- allow government to require motorway service areas and large gasoline stations to install electric vehicle recharging points; and
- require a set of common standards for charging points so they can be used widely across all vehicles.

Invest 200 million pounds in researching and testing driverless car infrastructure and 600 million pounds during the course of this Parliament in supporting the ultra-low emission vehicles, sums which had been previously announced

The measures were welcomed by businesses, which had been concerned that Prime Minister Theresa May's focus on withdrawing Britain from the European Union would push issues like air pollution down the agenda.

"It is encouraging to see the government's desire to make the U.K. a leader in new industries and enhance its role on the world stage," said Nick Molho, executive director of the Aldersgate Group, an alliance of business leaders, politicians and nonprofit groups that's pressing the Treasury on environmental policies.

As well as offering a new source of revenue, EVs could help reduce smog, which is linked to about 40,000 early deaths each year, and is draining 20 billion pounds a year from the economy, according to the Royal College of Physicians.

The government is working to publish a final plan setting out how it will tackle the issue next month. It has lost two court battles with ClientEarth, an environmental pressure group that sued claiming the current action was not good enough to meet legal requirements.

Although electric cars are still only about 1 percent of all U.K. vehicle sales, the country was one of only a handful worldwide to have more than 100,000 plug-in automobiles on the road, according to Colin McKerracher, analyst for Bloomberg New Energy Finance.

"The announcements today on charging infrastructure in particular should help pave the way for broader EV adoption in the 2020s," McKerracher said. "Much of the pressure for EVs across Europe comes from EU fleet-wide vehicle CO2 targets and it remains unclear what comparable standards the U.K. will enact or adopt post-Brexit."

26. London Mayor Seeks Pollution-Free Transport System by 2050

London's Mayor Sadiq Khan called for the city's entire transport network to operate with zero greenhouse-gas emissions by the middle of the century under a 3.3 billion-pound (\$4.2 billion) a year program aimed at reducing dangerous levels of pollution.

Transport for London will gradually expand the city's planned ultra-low emissions zone so that center of the city is pollution free by 2025 and inner districts by 2040. The entire metropolitan area would be covered by the zone by 2050, according to the draft Transport Strategy.

Khan said the city "simply cannot afford to take the same old approach to travel" as the population is expected to rise to 10.5 million people by 2041. That growth will add 5 million journeys a day.

Pollution in London is already some of the worst in Europe and causes almost 10,000 premature deaths a year, according to research by the Environmental Research Group at King's College London.

The strategy also envisions:

- “record investment” in walking, public transport and cycling, so those methods make up 80 percent of journeys by 2041, up from 64 percent in 2015. That would mean cutting car journeys by 3 million a day;
- more frequent trains on the London Underground and modernization of key lines including the Piccadilly, Central, Bakerloo and Waterloo & City in the mid-2020s;
- extensions to the Bakerloo line to beyond Lewisham in South London and the London Overground to Barking Riverside, the Northern line to Battersea and the Dockland Light Railway across the Thames River to Thamesmead;
- creation of a suburban rail metro service for outer London could improve journey times by 15 percent by the late 2020s;
- increase in safety so that no one is killed in or by a London bus by 2030; and
- deaths and serious injuries from road collisions would be eliminated from London's streets by 2041.

The strategy will require spending of about 3.3 billion pounds a year on average, equal to almost 1 percent of London's gross value added. Transport for London (TfL) will need make up a 700 million pound annual shortfall in its budget that will be created from 2018 when it will no longer get a grant from the national government.

TfL is confident the gap could be filled. It's developing a range of new revenue streams including issuing green bonds, selling land that's no longer needed, and earning more from advertising.

27. U.K.'s Drive to Urge Green Cars May Stall Due to Tax Policies

The speed with which U.K. businesses are incorporating ultra-low emissions vehicles into their company fleets could slow down because of new, unfavorable tax measures. Not only are subsidies set to end next year for ultra-low emissions vehicles (ULEVs)—which range from pure electric vehicles to plug-in hybrids and produce 75g or less of carbon dioxide per kilometer from their tailpipes. Since last April, businesses buying ULEVs have been forced to pay “road” taxes for the first time while uncertainty lingers over the future direction of “company car” tax.

These fiscal changes come as the Department for Transport (DfT) faces an uphill struggle to meet a target—imposed by the U.K.'s climate change laws—for ULEVs to make up 9 percent of the U.K.'s car fleet by 2020.

At the same time, Theresa May's new minority Conservative government has been tasked by the U.K. High Court to publish an Air Quality Plan by the end of July to address repeated breaches of air pollution limits for nitrogen dioxide, which cause an estimated 40,000 premature deaths a year.

Given these pressures, it's surprising that tax incentives for ULEVs are being “eroded year on year”, James Reardon, senior tax manager and company car specialist at KPMG UK, said to the press. “There's no reason to doubt that any government wants to incentivize environmentally friendly transport,” he said. “What's surprising is that those intentions are not reflected necessarily in tax policy. There's a disconnect there.”

The reason businesses play a big role in the drive for cleaner air is because they buy more than half of new registered cars every year, KPMG's Reardon said. "It's largely accepted that the company car market is an effective way" for the government "to get new ULEVs on the road."

"Whereas consumers may change their cars every 12 years, businesses typically update their fleets every three to five years" so the company car market "is going to drive the environmental agenda," he said.

That agenda should also help companies' budgets, according to a one-year old initiative run by the government with U.K. car makers Audi, BMW, Hyundai, Kia, Nissan, Renault, Toyota and Volkswagen called "Go Ultra Low" (GUL).

For instance, a company with a fleet of just 10 cars that runs the battery-powered BMW i3 over four years could make savings of almost 25,000 pounds (\$31,934) compared with using an equivalent traditional model, according to GUL. Savings come from both government financial incentives and reduced fuel costs.

Under existing plans, government subsidies for ULEVs-known as "plug-in" grants, are due to end at the end of March 2018. Launched in 2011, the government subsidies were reduced in 2016 to the current subsidies of 35 percent of the cost of a car, up to a maximum 4,500 pounds or 20 percent of the cost of a van or up to 8,000 pounds.

Last year, the so-called plug-in car and van grants contributed to a whopping 40 percent rise in sales of ULEVs in the U.K. from 29,965 in 2015 to 41,819 in 2016, according to the DfT's Vehicle Licensing Statistics for 2016.

While removing future incentives, the government also started to introduce punitive measures for businesses last April by introducing Vehicle Excise Duty—also known as the car tax or road tax—for the first time to new owners of ULEVs, Reardon said.

Under the new system these lower-emission models, including hybrids and plug-in hybrids, will pay between 10 and 100 pounds in first-year VED, and after year one, all vehicles other than pure electric vehicles with zero emissions will face a flat 140 pounds annual charge.

The changes mean the bulk of ULEVs will be paying VED as only 926 of some 8,000 ULEVs bought in May 2017 were pure electric—and therefore exempt from the "car" tax—according to the latest figures by the SMMT.

"While zero-emission cars, on the whole, remain exempt from VED, new technologies such as plug-in hybrid, the fastest growing ultra-low emission vehicle segment, no longer benefit, which could discourage their take up and undermine the ability of the UK to meet ever stricter CO2 targets," SMMT's Isacson said.

Plug-in hybrids, which run partly on petrol or diesel, were by far the largest segment of new ULEVs bought in the U.K. in June 2017, according to the latest SMMT figures.

The company car tax—also known as Benefit in Kind (BIK)—is another fiscal instrument which the government is failing to use as an effective tool to promote ULEVs, according to KPMG's Reardon.

Like VED, the levels of BIK tax rates that company car drivers pay are tied to the CO2 emissions of their vehicles, with owners of the lowest emitting ULEVs paying a 7 percent rate for 2017-18 compared to 37 percent for the most polluting cars.

But BIK rates are set to continue rising every year to as high as 16 percent for ULEVs in 2019/20 before dropping dramatically to a much lower rate of 2 percent for the least polluting, battery-operated cars from 2020/21 onwards.

In a move related to company car tax, the ACFO, whose members include most of Britain's major fleets, are also calling for Her Majesty's Revenue and Customs, the U.K.'s tax authority, to publish Advisory Fuel Rates for electric cars. Businesses use AFRs to reimburse company car or van drivers for business fuel without having to pay either income tax or National Insurance Contributions on the amounts, according to the Institute of Chartered Accountants in England and Wales.

Currently, company cars powered solely by electricity aren't subject to the car fuel benefit charge when an employer provides electricity for private mileage, according to an HRMC spokesman.

28. Italy in Trouble Over Alleged Fiat Chrysler Emission-Test Cheating

The European Commission has launched legal action against Italy over allegations of emission-test cheating by Fiat Chrysler. It is demanding Rome formally respond to its concerns that the carmaker has not justified the necessity for so-called defeat devices used to modulate emissions during tests on some of its diesel powered Fiat and Jeep vehicles.

Italy's Transport Minister Graziano Delrio said the authorities there have not found any illegal devices in use but he failed to get the Commission's legal action postponed.

Rome has two months to respond to the Commission's request and may be eventually taken to the European Court of Justice if the answer is found to be unconvincing.

The original complaint came from Germany which along with the Czech Republic, Greece, Lithuania, Luxembourg, Spain and Britain has been accused of failing to police the car industry adequately after the VW 'dieseldate' scandal.

EU officials have become increasingly frustrated with what they see as governments colluding with the powerful car industry and the legal move is the biggest stick the European Commission has available to force nations to clamp down on diesel cars that spew out polluting nitrogen oxide (NOx).

Delrio, however, said the material Italy had sent to the Commission during the mediation process showed that the vehicles' approval process was correctly performed.

Commissioner Elzbieta Biedrovska, responsible for internal market, industry, entrepreneurship and SMEs, said: "Car manufacturers have been treating emission tests laxly – some have even broken the law. The emissions scandal has shown that the responsibility to enforce the law and punish those who violate it can no longer be left solely to individual member states.

"While the European parliament and member states have recently made good progress on our proposal to overhaul the current system, it's high time that they reach a final agreement. Citizens' health and trust is at stake and we have no time to lose."

Under current EU law, national authorities are responsible for checking that a car type meets all EU standards before individual cars can be sold on the single market. When a car manufacturer breaches the legal requirements, national authorities are expected to recall models and “apply effective, dissuasive and proportionate penalties laid out in national legislation”.

Ugo Taddei, a lawyer for ClientEarth, said: “The commission’s action highlights that the Italian government tried to whitewash emissions cheating by Fiat Chrysler rather than protect the health of its citizens.

“The Italian case is particularly alarming but, unfortunately, this reluctance to deal with the problem of emissions controls strategies employed by car manufacturers is a pan-European failure.”

Fiat Chrysler has previously rejected the allegations against it, saying that it “believes that its emission control systems meet the applicable requirements”.

Fiat Chrysler has always strongly denied cheating on diesel emissions tests.

29. VW Emissions: Bosses Face Investigation Over Claims They Misled Investors

The Volkswagen chief executive and his predecessor are facing an investigation by German authorities into whether they misled investors by not releasing information about the company’s cheating on diesel emissions tests soon enough.

Prosecutors in Stuttgart formally launched their case against Matthias Müller and his predecessor Martin Winterkorn, who resigned as VW chief executive when the diesel emissions scandal broke in September 2015. The investigation relates to their role as executives in 2015 at Stuttgart-based Porsche Automobil Holding SE, the holding company that controls Volkswagen. Porsche SE chairman Hans Dieter Pötsch is also under investigation.

Prosecutors confirmed media reports that Germany’s federal financial supervisory authority filed a complaint in 2016 asking prosecutors to investigate executives from the holding company. They are accused “of knowingly delaying telling shareholders about the financial consequences for Porsche SE of software manipulation in diesel vehicles by Volkswagen AG”.

Porsche SE said in a statement: “We are convinced that we have duly fulfilled our capital market disclosure requirements.” A Volkswagen spokesman refused to comment on the prosecutors’ statement when contacted by Agence France-Presse.

VW has admitted equipping around 11m cars worldwide with software that sensed when cars were on test stands and turned emission controls up, then turned the controls off during every day driving to improve performance. It has agreed to at least \$16bn (£12bn) in civil settlements with environmental authorities and car owners in the US, and to a \$4.3bn criminal penalty. Seven VW executives have been criminally charged in the US.

The company also faces investor lawsuits in Germany alleging it did not inform shareholders of the scandal quickly enough. VW says it met its duties. The company apologized for the scandal and says it is changing its culture and practices.

30. Three Bosch Managers Targeted as German Diesel Probe Expands

A German probe into whether Robert Bosch GmbH helped Volkswagen AG cheat on emissions tests intensified as Stuttgart prosecutors said they were focusing on three managers at the car-parts maker.

While Stuttgart prosecutors didn't identify the employees, the step indicates that investigators may have found specific evidence in the probe. Previously, prosecutors have said they were looking into the role "unidentified" Bosch employees may have played in providing software that was used to cheat on emission tests.

"We have opened a probe against all three on suspicions they aided fraud in connection to possible manipulation in emissions treatments in VW cars," Jan Holzner, a spokesman for the agency, said. "All of them are managers with the highest in middle management. "

Bosch, which is also being investigated by the U.S. Department of Justice, has been caught up in the VW diesel scandal that emerged in 2015 over allegations its employees may have helped rig software that helped the carmaker to cheat emission tests. Earlier this year, Stuttgart prosecutors opened a similar probe into Bosch's role in connection with emission tests of Daimler cars.

A spokesman for Bosch said that while he can't comment on individual employees, the company "takes the overall allegations in diesel cases seriously and has been cooperating fully from the beginning of the probes."

The Stuttgart probe is running parallel to the central criminal investigation in Braunschweig, closer to VW's headquarters. That investigation is targeting nearly 40 people on fraud allegations related to diesel-emission software, including former VW Chief Executive Officer Martin Winterkorn.

Prosecutors' interest extends to multiple units in the VW family—including luxury brands Audi and Porsche. In addition, Stuttgart prosecutors are also reviewing a third case related to Bosch's cooperation with Fiat Chrysler Automobiles NV on software for diesel engines.

31. Ex-Audi Manager Arrested in Munich Is Said to Be Charged in U.S.

Munich prosecutors arrested a former manager at Volkswagen AG's Audi unit in a probe of the diesel-emissions scandal three days before he was charged by the U.S. Justice Department. Giovanni Pamio was arrested July 3 by Munich prosecutors, before the U.S. Justice Department filed charges against him.

The U.S. Department of Justice (DOJ) announced that the former Audi AG manager has been charged with fraud for his alleged role in helping Volkswagen AG cheat U.S. emissions tests in thousands of Audi "clean diesel" vehicles. Giovanni Pamio, 60, an Italian citizen, is charged with conspiracy to defraud the U.S., wire fraud, and violation of the Clean Air Act. Pamio was formerly head of Thermodynamics within Audi's Diesel Engine Development Department in Neckarsulm, Germany.

According to the complaint, from in or about 2006 until about November 2015, Pamio led a team of engineers responsible for designing emissions control systems to meet emissions standards for diesel vehicles in the U.S. After Pamio and co-conspirators realized that it was impossible to calibrate a diesel engine that would meet NOx emission standards within the design constraints

imposed by other departments at the company, Pamio directed Audi employees to design and implement software functions to cheat the U.S. emissions tests. Pamio and co-conspirators deliberately failed to disclose the software functions, and they knowingly misrepresented that the vehicles complied with U.S. NOx emissions standards, the complaint alleges.

Pamio is the eighth person charged in the U.S. probe into Volkswagen's efforts to cheat on diesel emissions tests. The company is paying more than \$24 billion in fines and restitution to car owners related to the scandal so far.

Munich prosecutors said earlier July 7 that they were targeting individuals for the first time in their Audi investigation, including the suspect arrested July 3, said spokeswoman Andrea Grape. She declined to identify him and said that the move wasn't made at the request of U.S. authorities.

The U.S. alleged that Pamio conspired to defraud U.S. regulators and consumers through software designed to falsify results in thousands of Audi vehicles marketed as "clean diesel," the Justice Department said. Still, Pamio's arrest might frustrate any effort by U.S. prosecutors to bring VW officials to America to face trial. Most of the men charged so far have been German citizens, who can't be extradited to face trial in a non-European Union jurisdiction.

While Pamio is an Italian living in Germany, who can be extradited, any probe in the country would take precedence over the U.S. charges. Even after a German case, the former manager could fight his extradition and claim he would be prosecuted for the same offense twice as the German and DOJ investigators are both looking at allegations regarding U.S. car sales. A suspect can file multiple appeals that may delay the process for a year, according to Wallasch.

Munich prosecutors started to look into Audi's role in 2015, shortly after VW admitted it used software to circumvent emissions standards in the U.S. For 1 1/2 years, the probe was directed against unnamed people. The fact that Munich prosecutors have now identified suspects indicates that the investigations has uncovered evidence supporting the allegations.

32. CO2 Emissions From New Vans in Europe Continued To Fall In 2016 in the Lab

Average carbon dioxide (CO2) emissions of new vans registered in 2016 in the European Union (EU) fell by 4.5 grams (g) per kilometer, compared to the previous year. The reported fuel efficiency improved by 2.7%, according to preliminary data published recently by the European Environment Agency (EEA). This is the highest annual reduction since 2013.

The average van registered in the EU in 2016 emitted 163.8 g CO2/km, which is 4.5 g less than in 2015. This reduction brings the EU average emissions 6.4% below the 2017 target of 175 g CO2/km. This target was already met in 2013. Further efficiency improvements are still needed to reach the EU's more stringent target of 147 g CO2/km set for 2020.

Key findings:

- In 2016, almost 1.6 million new vans were registered in the EU, an increase of 9 % compared to the previous year. More new vans were sold in most Member States. However, three Member States reported lower sales: Latvia (-25%), Czech Republic (-19%) and France (-8.2%).
- Two out of three new vans (66%) registered in the EU were sold in just four Member States: the United Kingdom (22%), France (18%), Germany (15%) and Italy (11%).

- The average fuel-efficiency of new vans varied widely across Member States due to the different models and sizes of vehicles sold in each country. Average emissions were lowest in Portugal (140.5 g CO₂/km), Bulgaria (141.5 g CO₂/km) and Cyprus (143.7 g CO₂/km) and highest in Slovakia (185.6 g CO₂/km), the Czech Republic (183.8 g CO₂/km) and Germany (178.8 g CO₂/km).
- The average weight of new vans sold in 2016 also varied across countries. Smaller vehicles (lighter than 1 620 kg) were sold in Bulgaria, Malta and Portugal; larger vehicles (heavier than 1 940 kg) in Slovakia, Czech Republic and Austria.
- Only 10 177 electric and plug-in hybrid vans were sold in 2016, representing 0.6 % of the total EU van sales. This is significantly lower than the 157 096 electric and plug-in hybrid passenger cars sold the same year, a share of 1.1% of total car sales.
- Diesel vehicles continue to make up the vast majority of the new van fleet, constituting 96% of sales.

The EEA collects and regularly publish data on new light commercial vehicles registered in Europe, in accordance with Regulation (EU) No 510/2011. The data reported by all Member States in order to evaluate the efficiency of the new vehicle fleet includes information on CO₂ emissions and vehicle weight.

It has not yet been confirmed whether different manufacturers have met their own specific annual target for 2016, based on the average weight of the cars they sold. The EEA will publish the final data and the European Commission will confirm manufacturers' individual performances in the autumn.

Member States report new vehicles' CO₂ emission levels, measured under standardized laboratory conditions, following the requirements of the New European Driving Cycle (NEDC) test procedure. This procedure is designed to allow a comparison of emissions for different manufacturers. However, in recent years it has been widely recognized that the NEDC test procedure, dating from the 1970s, is outdated and does not necessarily represent real-world driving conditions and emissions due inter alia to a number of flexibilities that have allowed vehicle manufacturers to optimize the conditions under which their vehicles are tested. The EEA has recently published a non-technical guide explaining the key reasons for the differences observed between official and real world driving emissions.

Greg Archer, clean vehicles director of campaign group Transport & Environment, told reporters that the environment agency's data might not reflect the real-world fuel economy of vans because manufacturers are able to manipulate "obsolete tests." The gap between official carbon dioxide and fuel economy figures for vans, which are derived from laboratory tests, and real-world performance has been estimated at 33 percent, Archer said.

The European Environment Agency said in a statement that it was "widely recognized" that the test used in the EU to measure van carbon dioxide emissions and fuel economy "is outdated and does not necessarily represent real-world driving conditions and emissions."

The EU's test procedures for vehicle emissions have been discredited in the wake of the scandal in which German manufacturer Volkswagen was found in the U.S. to be using an illegal defeat device in some diesel models to suppress nitrogen oxide emissions during tests. The EU is moving towards on-road testing of vehicles, rather than laboratory tests, for regulatory compliance purposes.

33. Rise in Renewables Helps Emissions Drop 2.6% in EU

The volume of greenhouse gases emitted by participants in the European Union's emissions trading system (ETS) fell by 2.6 percent in 2016 compared to 2015, the European Commission said. Emissions from fixed installations, such as power plants and industrial facilities, fell by 2.7 percent, while emissions from aviation, which comprises only a small part of total ETS emissions, rose by 7.9 percent, according to commission figures.

The ETS covers about 11,000 fixed installations, along with aviation emissions from intra-EU flights. The commission, the EU's executive arm, said the emission figures covered more than 99 percent of participants, which were required to surrender ETS carbon permits for their 2016 emissions by April 30. Each ETS permit is equivalent to 1 metric ton of carbon dioxide.

A surplus of carbon permits in the ETS, which has kept the carbon price low, now stands at about 1.7 billion, compared to previous estimates of 2 billion, according to the commission. A reserve for excess surplus allowances, which will become operational in January 2019, will further reduce the surplus, it said.

The EU carbon price stood at about 4.60 euros (\$5.13) May 17 compared to a level of 30 euros (\$33.35) that EU policymakers consider to be necessary to lead to significant investment in decarbonization by ETS participants.

34. EU Panel Backs 'Stop-the-Clock' Emissions Exemption for Airlines

Long-haul flights that arrive in or leave European Union airports would continue to be exempted from a requirement to participate in the bloc's greenhouse gas emissions trading system, under a legislative proposal backed by the European Parliament's environment committee July 11. However, the exemption would run only until the end of 2020, and the possibility of re-including intercontinental flights in the EU emissions trading system should be kept open if the International Civil Aviation Organization's emissions-capping scheme falls short, according to the committee's vote.

Aviation industry representatives criticized the environment committee's position July 11, saying that it could lead to double regulation and an overlap with the ICAO scheme, which is known as CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation).

Aage Dunhaupt, spokesman for Airlines For Europe, which represents the main European carriers including Air France-KLM and Lufthansa, told reporter July 11 that EU lawmakers had a skeptical view of CORSIA that "we do not share." It was a "united position of all our airlines" that "when CORSIA kicks in, we make sure we do not have a double-charge system," Dunhaupt said.

Sylviane Lust, director general of Airlines International Representation in Europe, which represents holiday operators such as Monarch Airlines and Thomson Airways, said that "we would like to be part of the CORSIA agreement and nothing else. We can't afford to have regional systems duplicating the global system."

Under CORSIA—which ICAO agreed to in October 2016—any emissions from aviation above the 2019–2020 level will after 2020 be compensated for by credits from projects that reduce emissions in other sectors, making growth in flights between countries theoretically carbon-neutral. Until 2027, participation in CORSIA is voluntary, but many of the main aviation

countries—including the EU countries and the United States—will take part. Some large countries, including India and Russia, will not participate in the voluntary stage, however.

Currently, because of CORSIA, intercontinental flights are exempted from the EU emissions trading system (ETS) under an arrangement known as “stop-the-clock.” However, Intra-EU flights are included in the ETS.

The stop-the-clock exemption expires at the end of 2017. The European Commission, the EU’s executive, proposed in February to extend the exemption at least until the details of CORSIA become clear. If CORSIA is seen to be failing to prevent rising global warming emissions from aviation, the EU could act to bring intercontinental flights into the ETS, meaning airlines’ emissions would be subject to a cap, and airlines would have to buy carbon credits for any emissions above the cap.

Julie Girling, a British center-right lawmaker who is responsible for preparing the European Parliament’s position on the stop-the-clock continuation, said in a statement July 11 that the exemption for intercontinental flights should be continued only through the end of 2020. “I believe this exemption must be time-limited so that we can be sure that the CORSIA will deliver its objectives,” Girling said.

Andrew Murphy, aviation manager at environment group Transport & Environment, said in a July 11 statement that aviation “must make a fair contribution to global climate efforts,” and until more detail about CORSIA is available, lawmakers’ “skepticism is well justified.”

Environment committee lawmakers backed the draft EU regulation by which the continuation of the stop-the-clock exemption would be implemented on a 57-3 vote, with 6 abstentions. The full European Parliament will vote on the measure during a Sept. 11-14 session. To be finalized, it must then be agreed to between the parliament and the Council of the EU, which represents the governments of the bloc’s member countries.

If no agreement is reached on the extension of the stop-the-clock measure after the end of 2017, all airlines flying into and out of EU airports would be required during spring 2018 to surrender carbon allowances to cover their emissions during 2017.

NORTH AMERICA

35. Trump to Withdraw U.S. from Paris Climate Accord

President Donald Trump announced the U.S. would withdraw from the Paris climate pact and that he will seek to renegotiate the international agreement in a way that treats American workers better.

“So we are getting out, but we will start to negotiate and we will see if we can make a deal, and if we can, that’s great. And if we can’t, that’s fine,” Trump said, citing terms that he says benefit China’s economy at the expense of the U.S.

Trump’s announcement, delivered to cabinet members, supporters and conservative activists in the White House Rose Garden, spurns pleas from corporate executives, world leaders and even Pope Francis who warned the move imperils a global fight against climate change.

“In order to fulfill my solemn duty to protect America and its citizens, the United States will withdraw from the Paris climate accord, but begin negotiations to re-enter either the Paris accord or really an entirely new transaction on terms that are fair to the United States, its businesses” and its taxpayers, Trump said.

Although cast as a final decision, the announcement only prolongs uncertainty over the U.S. role in an agreement among almost 200 nations to address global warming. Trump is kicking off a withdrawal process that will take until November 2020 to unfold—creating an opening for him to reverse course and injecting it as an issue in the next presidential election.

Under the terms of the deal, the earliest the U.S. can formally extricate itself from the accord is Nov. 4, 2020—the day after the next presidential election. And Trump would have wide latitude to change his mind up until that point.

Trump, who has called climate change a “hoax,” campaigned on the pledge to exit the 2015 pact, and criticized it as “one-sided” against U.S. interests. White House legal advisers and some Republican lawmakers had warned that staying in the accord could undercut Trump’s efforts to rescind rules on power-plant emissions and fuel efficiency.

The agreement “front-loads costs on the American people to the detriment of our economy and job growth while extracting meaningless commitments from the world’s top global emitters, like China,” a White House memo said. “The U.S. is already leading the world in energy production and doesn’t need a bad deal that will harm American workers. “

Under the terms of the agreement, nations can adjust their emissions targets and their pledges vary widely. For instance, where the U.S. pledged to cut greenhouse gas emissions by at least 26 percent from 2005 levels, China said it would only begin reducing its emissions by about 2030. And India said it would only reduce the carbon intensity of its economy, meaning the nation’s emissions would continue to rise.

Conservative groups quickly applauded Trump’s decision.

Environmentalists blasted the decision, saying it would turn the U.S. into an international pariah on climate change, even though it would not halt a global clean-energy revolution.

“The world has already resolved to act on climate, the renewable-energy industry is growing exponentially, and people all over the globe are becoming part of the clean energy future,” said Greenpeace USA Executive Director Annie Leonard. “Progress will continue with or without Donald Trump, but he is making it as painful as possible for people around the world. “

The move will have significant environmental and diplomatic consequences. As the richest nation and the second-largest emitter of carbon dioxide, the U.S. is central to efforts to address global warming. The Vatican, European leaders and companies as diverse as Exxon Mobil Corp. and Microsoft Corp. had urged the president to remain in the pact, with last-minute appeals by Tesla Inc.’s Elon Musk and Apple Inc.’s Tim Cook.

Trump has already moved to dismantle regulations and government programs to fight global warming. He ordered a review of fuel-economy standards for cars and light trucks, which along with other vehicles are the U.S.’s largest source of greenhouse gases. And he set in motion a process to scrap the Clean Power Plan, which would have required utilities to slash their carbon-dioxide emissions. The EPA is also moving to rescind rules to prevent methane leaks.

Withdrawal would put the U.S. in league with just two other nations—Syria and Nicaragua—that are not participating in the agreement.

At the recent G-20 meeting, the US insisted on inserting the following paragraph on US position on the Paris agreement. "The United States of America announced it will immediately cease the implementation of its current nationally-determined contribution and affirms its strong commitment to an approach that lowers emissions while supporting economic growth and improving energy security needs."

U.S. climate efforts won't completely cease just because Trump is walking away from Paris. States including California, New York and Massachusetts continue to move forward with aggressive policies to cut carbon emissions. Anheuser-Busch InBev NV, Amazon.com Inc., Alphabet Inc.'s Google and other companies continue their push to power their facilities with wind and solar energy. Low-carbon wind, solar and natural gas are so cheap that the Department of Energy is studying what it can do to help ailing, older coal and nuclear plants.

36. Pruitt Touts Vehicle GHG Rules As 'Progress' On CO2 Despite Rollbacks, Hypocrisy?

EPA Administrator Scott Pruitt is touting the Obama administration's light-duty vehicle greenhouse gas standards as the "greatest progress" EPA has made with respect to reducing carbon emissions, comments that appear paradoxical as the Trump administration works to potentially relax those standards and seeks to more broadly undermine climate policy efforts.

"I think the greatest progress we have made as an agency has really been honestly with mobile sources," Pruitt said, referring to joint Department of Transportation fuel economy and EPA vehicle GHG standards for light-duty vehicles. EPA's "focus" on mobile sources over the last several years made a "substantial difference with respect to GHGs and [carbon dioxide]," he added.

Pruitt's comments came in response to a line of questioning from Sen. Lisa Murkowski, chairman of the Senate appropriations interior subcommittee, during a June 27 subcommittee hearing on EPA's budget request.

Murkowski asked Pruitt to "speak to some of the commonsense part of the [budget] proposal" that would have a "positive impact on climate. Something I can give the folks back home."

Pruitt pointed to EPA's vehicle GHG standards highlighting the progress in reducing emissions prior rounds of the standards have made.

He then quickly pivoted to an oft-repeated line about industrial sector steps like hydraulic fracturing and horizontal drilling that helped spur conversion of electricity generation from coal to lower-carbon to natural gas.

But when Murkowski pressed further for Pruitt to specify whether and how the EPA's fiscal year 2018 budget proposal "as we now have" allows the agency to "continue those positive outcomes" with regard to emissions reductions, Pruitt again offered up the "CAFE standards." And he cited the mid-term review of the model year 2022-2025 standards, which the Trump administration re-opened in March, that he noted will be completed in April 2018. "I think that will continue the progress we are making with respect to CO2."

Pruitt's comments appear to conflict, however, with the Trump administration's efforts to date on the vehicle GHG standards, as well as its broader efforts to roll back or weaken many Obama-era climate regulations. EPA's re-opening of the mid-term review reversed a January determination by the outgoing Obama administration maintaining current standard levels for MY22-25.

Pruitt, in his responses to Murkowski and other lawmakers, also appeared to distinguish between EPA's regulation of GHGs from mobile sources and from stationary sources like power plants -- the latter of which Pruitt has repeatedly questioned whether EPA has the authority to regulate.

In response to later questions from Sen. Tom Udall (D-NM), Pruitt was more explicit in that distinction. "We are responding to the CO2 issues [with] the regulation of mobile sources. We are also evaluating the tools that we have in the toolbox with respect to stationary sources."

The exchange between Murkowski and Pruitt on the CAFE standards also highlights the tricky position some Republican lawmakers are finding themselves in as their states are being confronted with increasingly obvious climate change impacts.

"There have been some directed criticisms that [the budget request] zeroes out" climate programs, said Murkowski, who noted she comes from a state with a "relatively open" discussion of climate change.

"I come from a state where we talked about the fact that we see our climate that has changed," Murkowski said referencing climate impacts in her state that include reduced ice, causing erosion of the state's shores and other effects. Murkowski suggested that elements of Pruitt's "back-to-basics" agenda could help address environmental impacts associated with climate change, but she then pressed him to identify parts of the budget request that would have "a positive impact" on the climate.

Despite Pruitt's reference to EPA's CAFE standards, the Trump administration's FY18 budget plan proposes sharp cuts to climate science research and policy efforts, including the elimination of the agency's voluntary climate partnership programs.

More generally, the hearing did not dive into the weeds of climate policy, but Pruitt's broader point about the vehicle GHG standards appeared to be some kind of counterpoint to a barrage of attacks by groups including environmentalists and Democrats that the Trump budget plan appears to eviscerate climate efforts.

Murkowski's question came in the wake of a question, immediately prior, from Udall, the ranking member on the subcommittee, pressing EPA to explain controversial changes and deletions from its climate change website that have received extensive attention both in the press and on Capitol Hill. "Tell us what you found inaccurate" Udall said, seeking a formal response from EPA to the committee. "You got political conservatives, liberals who follow this issue saying [the website] was the gold standard."

Pruitt pledged to provide that information as part of the subsequent hearing record.

37. Volvo Electrification Plan May Boost Backers of EPA's Vehicle GHG Rules

Volvo's announcement (see story below.) that all of its new car models beginning in 2019 will be hybrids or electric vehicles -- signaling an end to a reliance on gasoline- or diesel-only powertrains -- is boosting backers of EPA's vehicle greenhouse gas rules who say it highlights an industry shift to clean vehicles that runs counter to any Trump administration moves to weaken the standards.

At the same time, sources suggest that other automakers are likely to cite Volvo's status as a small, premium automaker to claim that more regulatory flexibility is still needed through model year 2025, even if they acknowledge that Volvo's July 5 announcement underscores automakers' push to electrify their fleets over a longer timeframe.

Safe Climate Campaign's Daniel Becker argues that Volvo's move could also help California defend the stringency of current regulations by citing the automaker as an example of a company making cleaner, not "dirtier," cars in a way that also poses threats to the rest of the industry if it does not get on board.

"If I am a competing auto company, I am going to be looking over my shoulder with great concern that Volvo is about to surpass me making advanced clean vehicles," Becker said.

Volvo's announcement may invite new discussions over what the ongoing trends toward cheaper hybrids and electric vehicles mean for both near- and long-term vehicle GHG rule compliance. Defenders of the Obama EPA rule noted that compliance with the MY22-25 standards was already possible without widespread electrification or hybridization.

EPA's rules broadly encourage more efficient technologies and award credit multipliers for electric vehicles. An April article in IEEE Spectrum, a technical publication, notes that wider use of mild hybrid technology could enable use of four-cylinder engines instead of six-cylinder engines in popular pickups and SUVs. But the article suggests that the Trump administration's decision to reopen EPA's vehicle GHG rules has put broader deployment of that technology at risk, potentially hurting suppliers that have developed such technologies.

38. ICCT Report Analyzes Diesel Technology Developments Since 2012 Efficiency Rule

On July 10, 2017, the International Council on Clean Transportation (ICCT) published a new report that provides an analysis of advanced diesel engine technology developments and trends in the U.S. subsequent to the technology assessments conducted five years ago by the U.S. EPA and the National Highway Traffic Safety Administration to inform the 2017-2025 passenger vehicle fuel economy and greenhouse gas emissions regulations. Diesel vehicles remain a tiny fraction of the overall U.S. light duty vehicle fleet. However, despite their small share, they have several features that make them attractive to both automakers and consumers. According to the report, several engine and emission control system improvements are leading to lower costs and higher benefits from dieselization, the report says.

Highlights from the report include:

- Diesels have two major advantages over gasoline engines: they deliver significantly higher fuel economy, and they have the ability to haul heavier cargo. Those things make diesels a strong option for customers who put a high priority on towing or fuel economy and for manufacturers that want to market high fuel economy.

- In the EPA/NHTSA 2012 efficiency rulemaking, diesel-powered autos were estimated to reduce fuel consumption by around 20% compared with baseline gasoline vehicles. However, a host of engine improvements and the near production of 48V mild hybrid systems are likely to lead to diesels that reduce fuel consumption by more than 30%. The higher-voltage electrical system will take the load of powering ancillary systems off the engine, directly increasing efficiency. In addition, the capacity for regenerative braking and e-boosting provides as much as two-thirds of the benefits of a strong hybrid drivetrain at half the cost or less.
- Significant research continues on diesel turbochargers, some of whose components are appearing in downsized gasoline engines. Each generation improves performance and permits engine downspeeding and downsizing. Major suppliers already have turbochargers ready for expanded use of 3- and 4-cylinder engines. These downsized engines promise even greater gains in fuel economy.
- Future diesels are expected to cost less and have greater benefits than forecast. The costs are lower because of less expensive emission control systems and improved engine components. Adding the costs and benefits of a 48V mild hybrid system and electric supercharging leads to slightly higher costs per percent reduction in fuel consumption, but average total costs remain lower than for full hybrids.

The report concludes that diesels offer a promising pathway for compliance with fuel efficiency and GHG standards and add another option in manufacturers' toolboxes. Their use is likely to vary significantly from manufacturer to manufacturer and model to model, the report says. This will depend on each automaker's assessment of diesel's cost-effectiveness compared with other technologies, such as hybrids, and customer's desires for the advantages of diesel engines. Coming cost reductions will improve diesels' competitiveness and may increase their market share in the future, according to the report.

39. California Extends Landmark GHG Trading Program

The California Legislature has approved legislation extending the state's cap-and-trade market to 2030, clearing a key two-thirds vote threshold with bipartisan support. The vote is a major win for Gov. Jerry Brown, who late last week was pushing hard for the two-thirds margin, which protects the program from future legal challenges alleging it imposes unlawful taxes, as well as key political support.

The legislation cleared the Senate, with the support of just one Republican lawmaker. Late on July 17th, the Assembly passed the extension bill 55-21, also clearing the two-thirds margin. That vote included seven Republican Assembly members in support, while 18 GOP members and three Democrats voted against it. Two Democrats abstained from the vote, one was absent and one seat is vacant.

Lawmakers also passed a separate measure aimed at reducing conventional pollutants in disadvantaged areas, key to winning the support of lawmakers sympathetic to the environmental justice community.

The GOP support for the measure -- while small -- is a significant shift from years past, when the party was virtually unified against climate mitigation bills:

Support for cap and trade is a bid for political relevance for Republicans who have been shut out of all positions of power in state government and have paltry prospects to regain influence. Some

advocates hope California could become a political trendsetter when it comes to broader political support for fighting climate change.

Former Republican Gov. Arnold Schwarzenegger, who signed the 2006 legislation that provided the foundation for cap and trade, said the bipartisan vote “fills me with tremendous pride.”

40. CARB Faces Host Of Decisions After Lawmakers Back Post-2020 GHG Bill

Just-passed landmark legislation to extend California’s greenhouse gas cap-and-trade program to 2030 presents state air regulators with a host of critical policy and regulatory choices about the program, which will have major implications for costs to regulated entities and consumers, the state’s broader economy and how it reduces GHGs to meet declining emissions limits.

Some of the decisions the California Air Resources Board (CARB) faces include the dollar amount for a new GHG allowance price ceiling; the number of allowances currently in reserve that should be released into the market in the coming years to prevent price spikes; how to increase GHG offset projects in California to meet a new minimum mandate; and how many allowances to allocate freely to certain sectors in future compliance periods.

A CARB spokesman says that board staff will hold an initial public workshop on the requirements of the legislation in late summer or early fall.

But the board is slated to meet July 27 to consider long-pending amendments to the existing cap-and-trade program that will primarily affect the third compliance period from 2018-20, though the revisions also include post-2020 emission reduction caps, the spokesman says.

Aside from the key design features that CARB must now flesh out, the recent bipartisan votes are a watershed moment for the trading program because it offers certainty that the program will be around for the long term by largely shielding it from potential future lawsuits that the program’s allowance auctions are illegal taxes or fees. Such certainty could bolster participation in the auctions and potentially drive up the price of GHG allowances, which would in turn put increasing pressure on entities to reduce GHG emissions, some observers have said.

While many Republicans who voted against AB 398 criticized how much power and authority it gives CARB to determine critical elements of the post-2020 program, others who support the market-based strategy to reduce GHG emissions are applauding the approach.

41. Carper Weighs Bipartisan Letter Seeking Talks On 2030 Vehicle GHG Rules

Sen. Tom Carper is in the early stages of developing a bipartisan letter that could urge the Trump administration to negotiate light-duty vehicle greenhouse gas and fuel economy limits out to 2030 -- potentially offering an eased political path to giving automakers some flexibility in current rules through 2025 in exchange for continued progress in later years.

Carper, the top Democrat on the Senate environment committee, acknowledged work on the effort in June 28 remarks to reporters. “There have been “some good conversations” on fuel efficiency regulations in recent weeks involving “states like California, Republicans and Democrats,” he said. “The idea here is to find a smooth path forward so that vehicle manufacturers have some predictability and certainty and we continue to make steady progress towards ever-more-efficient vehicles,” Carper added.

The effort comes as the public negotiation over the Trump administration's review of vehicle standards for model years 2022-2025 is at the earliest stages.

A bipartisan letter could offer automakers, states and federal regulators a possible route to avoiding a nasty regulatory and legal battle over the requirements.

The effort also has the short-term potential to blunt pressure for proposed legislation by Sens. Roy Blunt and Debbie Stabenow, which seeks to "harmonize" EPA and Department of Transportation (DOT) rules -- an approach that faces an uncertain future in light of criticism from environmental groups.

At issue is how the Trump administration, states, automakers and advocacy groups ultimately engage in the wake of the administration's decision to reopen EPA's "mid-term review" of its GHG standards for MY22-25, after the Obama administration issued a last-minute determination in January seeking to leave the standards in place.

DOT was already scheduled to conduct a separate but related regulation to issue fuel economy standards for those years, but the Trump's EPA's action has threatened to set off a new round of battles with defenders of standards. That includes California, which has vowed to press forward with its own program in line with existing federal GHG requirements.

This, in turn, has led to speculation about whether the administration may try to revoke California's existing Clean Air Act waiver to pursue its own vehicle GHG program through MY25, a move that all observers predict would spawn a vicious legal fight.

But California Air Resources Board Chairwoman Mary Nichols in March invited auto industry representatives "to come and sit down with us, if you have specific concerns about the implementation of the existing regulations that can be addressed without weakening the overall impact."

While Nichols' language is ambiguous -- and conveys no enthusiasm for weakening the MY22-25 standards -- observers say it leaves open the door to a scenario in which near-term compliance timelines are eased, in exchange for federal commitments for a robust GHG program through 2030. That approach at least allows for potential discussion of standards out to 2030, along the lines of the possible bipartisan Senate letter.

The auto sector, under the umbrella of trade groups such as the Alliance of Automobile Manufacturers, has called for more flexibility under the MY22-25 standards, citing factors including low gasoline prices which have blunted demand for the most efficient vehicles.

But several observers have also said that the industry faces risks from an overly aggressive attempt to weaken the regulations, including a lack of regulatory legal certainty and the fact that even a successful effort to soften domestic GHG rules cannot blunt global pressure for continued innovation.

42. CEI Renews Call For Trump to Attack California's Vehicle GHG Rule Power

The Competitive Enterprise Institute (CEI) is citing an early effort to develop bipartisan endorsement of negotiations over vehicle greenhouse gas and fuel economy rules as a new justification for the Trump administration to pursue attacks on California's vehicle GHG authority -- illustrating the challenges to forging any bipartisan consensus on the issue.

“The administration should explore the legal implications of the Energy Policy and Conservation Act (EPCA), which prohibits states, like California, from adopting or enforcing law or regulations ‘related to fuel economy standards,’” CEI’s Marlo Lewis writes in a July 2 blog post, “Will the Swamp Let Trump Reform Fuel Economy?”

The post reprises a long-time criticism from foes of GHG regulations that vehicle GHG rules intrude on the Department of Transportation’s authority to regulate fuel economy. The argument is noteworthy because, as the Congressional Research Service recently noted the Supreme Court rejected it -- at least with respect to federal GHG rules -- in its landmark 2007 ruling in *Massachusetts v. EPA*. Specifically, the court noted that EPA’s public health authority is “wholly independent” of fuel economy mandates.

But Lewis’ argument seeks to revitalize the fuel economy preemption argument as an attack on California’s vehicle GHG rules -- which were not explicitly addressed in the court’s decision -- alluding to EPCA language barring any “state or political subdivision thereof” from regulating fuel economy.

California’s current vehicle GHG program relies on a provision in the Clean Air Act allowing it -- with EPA’s permission -- to enforce tougher state emissions standards than federal limits.

While Lewis and other critics say that EPA’s rules are de facto fuel economy limits, supporters of the rules note that they sometimes target different processes, such as GHGs emitted from vehicles’ air conditioning systems.

Lewis’ pitch comes as a number of sources are suggesting the auto sector wants flexibility under -- but not a full-scale political war over -- vehicle GHG and fuel economy rules.

His argument is crafted as a response to an effort to achieve a bipartisan Capitol Hill letter endorsing negotiations on vehicle fuel economy and GHG regulations that extend to model year 2030. The argument seems geared to support potential administrative or legislative efforts to hamstring California’s GHG regulations.

Lewis responds in particular to E&E’s report that Senate Environment & Public Works Committee Chairman John Barrasso (R-WY) was “working with Democrats on the issue” of vehicle rule negotiations, though Barrasso’s staff subsequently told reporters he has no intention of signing a letter endorsing such talks.

A draft letter on the issue floats parameters for possible talks on sector near-term compliance flexibility in exchange for continued progress on GHGs through MY30. Sources say the industry might be receptive to the deal because it would avert a multi-year legal free-for-all over the vehicle standards that would cause significant uncertainty and risk the possibility of California enforcing stronger state standards than federal requirements.

In his blog post, Lewis acknowledges such an outcome would occur, “but only if courts uphold California’s authority to regulate fuel economy under the guise of regulating tailpipe greenhouse gas emissions.” He adds: “Whatever accommodation to the Obama policy the Trump administration has to make in the immediate future to calm auto industry jitters, the long-term goal should be to abolish the source of the industry’s angst -- California’s de facto power to regulate fuel economy.”

Lewis, however goes even beyond that argument to suggest that fuel economy rules themselves should be abolished entirely -- a move that is extremely unlikely.

43. Several States Want Far Cleaner Diesel Trucks; Will EPA Start Rulemaking?

Almost one-third of the heavy trucks on U.S. roads now use the most stringent emission-control systems, which radically reduce their emissions of nitrogen oxides, soot, and other pollutants.

Commercial trucks log much higher annual mileage than passenger cars, especially the semi tractors that haul long-distance freight across the country. That makes reducing their emissions a hugely important piece of the air-quality and climate-change puzzle, especially globally.

In June 2016, government agencies from Arizona, California, Connecticut, Delaware, Nevada, New Hampshire, New York, Ohio, and Washington petitioned the EPA to look into tightening the truck-emission standards that went into effect for 2010. Massachusetts joined the list just days later.

The proposal calls for instituting "ultra-low nitrogen oxides (NOx) exhaust emission standards for on-road heavy trucks and engines." Specifically, the request wants NOx emission standard for new trucks lowered from the 0.2 grams per horsepower-hour to 0.02 g/hp-hr. That would represent a 90-percent reduction from current emission levels.

Last December, the environmental agency responded that it acknowledged "a need for additional NOx reductions from this category of vehicles and engines, particularly in areas of the country with elevated levels of air pollution." The EPA said it intended to initiate a rulemaking process, in consultation with stakeholders that would revise the existing federal "on-highway heavy-duty NOx emissions control program." It also said it would work to harmonize federal and California standards, since the state alone among all states has the legal right to set its own vehicle emission standards.

The agency suggested the necessary technical work to propose new standards would take roughly 24 months, with a target of new regulations to take effect for the 2024 model year. Whether such work will survive under new EPA administrator Scott Pruitt, a climate-science denier who has proposed a budget cut of more than 30 percent to the agency he runs, remains unknown. States are therefore watching this issue closely.

44. Climate Spending Targeted in Trump Budget

President Donald Trump's first budget request to Congress would cut or eliminate a range of programs designed to reduce greenhouse gas emissions, as well those helping communities prepare for more intense flooding or hurricanes expected to result from climate change.

The scope of climate funding established under President Barack Obama is broad, and Trump's budget took aim at much of it: It would terminate a NASA program to launch satellites to measure carbon dioxide in the atmosphere and slash grants to help local communities cope with the increasing risks of a natural disaster. A \$190 million effort to map the risks of flooding also would be eliminated.

Trump's proposed cuts come amid growing scientific consensus that climate change is real and accelerating—but deep skepticism about the risks from both the president and members of his administration. Trump had dubbed climate change a hoax, and Scott Pruitt, the head of the

Environmental Protection Agency, said focus on combating climate change under Obama distracted the agency from other important tasks.

But there were 15 separate billion-dollar natural disasters in the U.S. alone last year, three times the average since 1980, and environmental advocates say the nation needs to prepare for the impacts both being felt today and forecast to come in the years ahead.

Presidential budget proposals typically undergo significant changes in Congress, but they provide insight into White House priorities.

The proposed cuts are most pronounced at agencies tasked under Obama with reducing emissions for carbon dioxide from power plants, automobiles and oil and natural gas production.

EPA would lose about one third of its funding, including a steep cut to the office dealing with clean air and global climate change.

At the Energy Department, funding for the agency's arm charged with renewable energy and energy efficiency research would be cut by nearly 70 percent. Research on carbon capture and storage, which could help reduce emissions from coal, would also be cut.

The Federal Emergency Management Agency maps flood risks to help the National Flood Insurance Program decide how much to charge for coverage, alert homeowners if they're in danger and inform projects to reduce flood risk. The Trump administration argues that those services mainly benefit communities at risk of flooding, and so the cost should be paid locally. The \$190 million program would be eliminated under its plan.

A similar program at the National Oceanic and Atmospheric Administration to research how coastal communities can deal with sea-level rise would be eliminated. That cut would allow NOAA "to better target remaining resources to core missions and services," the budget document said. Programs designed to gather data about climate change also would be cut.

The budget proposes ending five earth-science programs at the National Aeronautics and Space Administration, including one that would measure carbon dioxide emissions and concentrations. The budget would also eliminate funding for the U.S. Geological Survey to study so-called biological carbon sequestration: when peat moss or other vegetation holds greenhouse gases, keeping them from entering the atmosphere.

Also gone would be U.S. efforts to help poor nations develop low-carbon energy or grapple with climate impacts. The administration wants to cancel funds run by the State Department aimed at encouraging clean energy. It would also stop all assistance aimed at helping other countries deal with the effects of climate change.

"America must put the energy needs of American families and businesses first," according to the section of the budget document justifying those cuts. That includes "promoting development of the nation's vast energy resources. "

45. Lawmakers' Hostility to EPA Budget Cuts Spurs Questions Over FY18 Funding

The House and Senate appropriations committees have started in earnest the process of crafting fiscal year 2018 budget bills for EPA, but legislators in both parties are rejecting the Trump

administration's request for deep cuts at the agency, boosting hopes that the final budget will be more robust than the 31 percent reduction President Donald Trump is seeking.

States that stand to lose hundreds of millions in grant funding under the White House proposal say Pruitt's comments at recent hearings signal that he is open to a higher spending level if Congress rejects the administration's request for a sharply reduced EPA budget:

Some state officials are hopeful that EPA Administrator Scott Pruitt will support continuing crucial grants to states for monitoring, cleanups, and other programs despite President Donald Trump's proposal to slash the grants in fiscal year 2018, with the officials citing Pruitt's weak defense of the cuts and ongoing agency issuance of the grants.

Both chambers' appropriations panels have held hearings on EPA, with Democrats and Republicans alike leveling criticism at the administration's FY18 budget request, which would cut EPA's budget from \$8.1 billion to \$5.7 billion -- a 31 percent drop.

EPA Administrator Scott Pruitt offered few specific defenses of the Trump administration's fiscal year 2018 budget request for the agency at a June 15 House appropriations interior subcommittee hearing, opening the door to lawmakers who have rejected the administration's proposed cuts to rewrite the plan.

Despite the signals that the administration's proposed cuts will not be enacted, whatever bill Congress ultimately produces is still likely to reduce EPA's funding from its current level:

Senate appropriators are echoing their House counterparts in objecting to the scale of proposed cuts in the Trump administration's proposed budget cuts for EPA in fiscal year 2018 and sending signals that they are likely to restore funding to popular agency programs.

Following their June hearings, lawmakers will next work on draft FY18 spending bills to set budget levels for EPA and other federal agencies. The White House budget request is meant to serve as a starting point for that process, but in practice Congress usually ends up ignoring it -- and Trump's proposal has received an unusually harsh reception even by that standard, being pronounced "dead on arrival" by some members of his own party.

The administration is not only hoping to cut EPA's overall budget, but would eliminate or sharply reduce scores of individual programs, including many with broad, bipartisan support -- such as diesel emission reduction grants, targeted airshed grants, and Superfund cleanups.

Those cuts have drawn criticism from many corners, but states in particular have warned that deep cuts to the grants that fund their operations could force them to scale back their activities even as Pruitt is pledging to return some of EPA's duties to those same state agencies:

The House and Senate appropriations subcommittees that oversee EPA will work in private over the coming weeks to craft their spending bills, which will be unveiled alongside public hearings where panel members will debate the legislation and vote on whether to advance them to the full committees. In turn, each full committee will consider amendments to the draft bills and then advance them to the chamber for a final vote.

If both chambers of Congress manage to pass their spending bills -- which is far from guaranteed -- a conference committee will form to reconcile differences between the two into a single

compromise bill that the House and Senate must approve again before sending it for Trump's signature.

Debate on the legislation is likely to center not only on how much money EPA will receive, and which program offices will face cuts, but also restrictions on the agency's policies that Congress can attach as "riders" to the funding bill. But Democrats in the Senate are demanding "clean" FY18 bills devoid of any policy riders, and can back up that demand with a filibuster since spending legislation needs 60 votes to clear the upper chamber:

46. House Report Maintains Voluntary Programs Despite Embrace of EPA Cuts

House lawmakers are formally spurning the Trump administration's proposal to eliminate numerous voluntary programs at EPA, including its Energy Star and Water Sense programs, signaling congressional support for the programs even though the agency's fiscal year 2018 spending bill continues a steady erosion in funding for EPA.

The House support for EPA's voluntary programs is detailed in newly released report language accompanying the House bill that imposes a roughly 7 percent cut on EPA.

The report language recommends retaining the Energy Star program -- though in tandem with a "review" of the shared responsibilities for the program at EPA and the Department of Energy and a reduced, \$31 million funding level in FY18. The committee cites as a rationale for the reduced funding level a third-party certification requirement that has directed "many product review responsibilities to outside vendors.

"The Committee continues to support the Energy STAR program and does not terminate the program as proposed," reads the report language released July 17.

Trump's budget specifically targeted programs like Energy Star -- which provides a federal seal of approval on energy efficient appliances -- as well as Natural Gas Star, Ag Star and Water Sense. And the proposed budget also broadly called for elimination of both climate change programs and popular regional water quality initiatives to protect water bodies such as the Great Lakes, Chesapeake Bay, and Puget Sound.

The report language offers the latest indication that many proposed Trump administration cuts are not going to happen, noting, for example, House plans to fund the Great Lakes Restoration Initiative at \$300 million -- the FY17 level. With respect to water quality initiatives, the Chesapeake Bay program gets \$60 million in funding, a cut of \$13 million below FY17, and Puget Sound receives \$25 million, or \$3 million below FY17.

But the report language is not a reprieve for many other agency efforts, expanding on plans for the roughly 7 percent cut to EPA's budget in the House spending bill. It also states -- in language applying to both EPA's Science and Technology account and Environmental Programs and Management Account -- that Congress "concur[s] with the Agency's proposed allocation of resources for workforce reshaping through buyouts and voluntary separation agreements offered to employees."

The proposed staff buyouts were a major focus on a July 17 conference call by former EPA regional officials and EDF Action to highlight concerns that the buyouts -- in tandem with the proposed budget cuts -- will substantially weaken the agency that has already lost over a fifth of its budget since 2010.

“What we are seeing, is an attempt by this administration, really led by [EPA] Administrator Scott Pruitt, to hollow out EPA,” EDF Action Senior Director Elgie Holstein said, citing the proposed “7 percent cut” to the agency budget and the proposed buyouts. Holstein said the pending buyouts could have a particularly significant effect on EPA’s Office of Research and Development, by authorizing funding for 183 staff departures in that office.

More broadly, Holstein noted that despite the spending bill preserving or even increasing funding for FY18 compared to FY17, the proposed legislation would still cut EPA’s science and technology function by roughly 14 percent, and slash EPA’s Environmental Programs and Management by roughly 9 percent.

And Holstein said the result would be an impact on EPA’s budget in real terms to levels not seen since the 1980s, despite growing agency responsibilities.

The conference call more broadly signaled the launch of a \$1 million campaign by EDF Action, running through Sept. 10, in congressional districts in several states -- Arizona, Colorado, Virginia, Minnesota, Nevada, Missouri and Florida, as well as Washington, DC. That includes the California district of House Appropriations panel Interior subcommittee chairman Ken Calvert (D-CA).

But former EPA transition head and frequent EPA critic Myron Ebell of the Competitive Enterprise Institute in recent comments to the Washington Examiner said EPA’s critics are planning their own push for cuts to EPA steeper than what the House is proposing, including cuts to regional office budgets.

The timeline for the public effort coincides with the possible congressional timetable for moving EPA’s spending bill, and environmental advocates appeared to indicate on the call that they would have more information in coming days on the state-by-state impacts of proposed EPA budget cuts.

Report language is typically a venue for Congress to offers specific instructions on implementation of EPA programs, even in cases when the Hill supports those programs, and the FY18 bill is no exception.

Other provisions in the report language address motor vehicle related programs.

- *Glider Kits.*—The Committee notes that the Phase 2 rule for Medium and Heavy-Duty Engines and Vehicles is generally supported by the trucking industry. However, under the Phase 2 rule, the Agency defined a glider kit as a new motor vehicle for the purposes of regulation. The Committee recognizes that glider kits typically do not incorporate new engines; therefore, classifying a glider kit as a new motor vehicle raises a number of valid concerns. The Committee also understands the intent of the provisions in the Phase 2 rule is to promote the removal of older, dirtier engines from the vehicle fleet in order to make air quality improvements. This is a policy that the Committee has strongly supported over a number of years albeit in a non-regulatory manner through the use of grants to encourage engine retrofits. The Committee urges EPA to study the emissions impact of remanufactured engines used in glider kits, compared to new engines, and issue a report to the Committee when available.
- *Diesel Emissions Reductions Grants (DERA).*—The bill provides \$75,000,000 for DERA grants. More than 10 million older, heavily polluting diesel engines remain in use that have yet to be retrofitted, repowered, or replaced, and over one million are expected to remain

in use in 2030. For fiscal year 2018, the Committee directs EPA to continue to make at least 70 percent of DERA grants available to improve air quality in non-attainment areas.

47. House Panel's Approval Of EPA Spending Bill Shows Disagreements Remain

The House Appropriations Committee has approved an EPA spending bill for fiscal year 2018 that provides the agency with significantly more than what the Trump administration had sought though the bill's passage offers a prelude to further negotiations among both House and Senate lawmakers over funding levels and policy riders.

During the committee's July 18 markup of the Interior and environment appropriations bill, Democrats rejected the measure in its current form, signaling they plan to fight to further increase funding and remove policy riders. And Republican appropriators indicated they remain open to adding funding for some programs that enjoy bipartisan support -- assuming they can win increased funding levels for EPA and other agencies during upcoming budget discussions.

The committee voted 30-21 -- along party lines -- to send the bill to the House floor, during a markup that highlighted questions over the ultimate fate of the bill in the House and in negotiations with the Senate and White House over final spending levels for fiscal year 2018.

"This funding level will ensure the agency is able to fulfill its core duties while streamlining the agency and reshaping its workforce," said Appropriations Committee Chairman Rodney Frelinghuysen (R-NJ). But Rep. Ken Calvert (R-CA), chairman of the Interior appropriations subcommittee, said several times that he remained hopeful that a pending broader budget deal on spending levels across the federal government might free up money to increase spending for specific, popular programs.

The bill approved by the committee provides \$7.5 billion for EPA, a 6.5 percent decrease from FY17. While the bill cuts the agency less than the massive 31 percent cut proposed by the Trump administration, the reduction of \$528 million from FY17 levels is drawing harsh fire from Democrats after years of budget decreases for the agency.

Frelinghuysen during his remarks praised parts of the bill, including an array of policy riders he said reflect the need to "cut job killing red tape." And Calvert in his opening remarks noted that the bill supports efforts by the Trump administration to "begin reshaping the workforce at EPA." But Rep. Nita Lowey (D-NY), the committee's ranking Democrat, underscored the minority's hostility to the legislation, asserting the bill would "cripple the agency" and that it risks a government shutdown by spurning Democratic lawmakers. And Rep. Betty McCollum (D-MN), the ranking Democrat on the Interior subcommittee, likewise called the legislation a "partisan bill that will not become law in its current form." She cited concerns over the proposed cuts on an agency that already has 2000 fewer staff than in 2010.

Democrats will seek to exploit perennial disunity within the Republican caucus on spending and other legislation that has historically left GOP leaders dependent on at least some level of Democratic support to approve spending bills. Those divisions may boost Democrats' leverage to demand further concessions in the legislation -- including removal of at least some riders or addition of additional funding in exchange for providing needed votes.

The proceeding comes weeks after a critical mass of Senate Democrats already pledged in a letter to Senate appropriators to block inclusion of policy riders in spending bills. But meeting the

demands of Democrats also runs counter to pressure from conservatives for even deeper cuts to EPA than in the current House bill.

A preview of likely demands surfaced as Democrats during the July 18 markup demanded a roll call vote on several amendments, including an unsuccessful amendment from McCollum seeking to strip 16 policy riders from the bill. A few of the most high-profile riders include a delay of EPA's ozone standard, language authorizing quick withdrawal of the Waters of the U.S. rule, and language blocking financial assurances requirements under Superfund.

At the same time, a second, and more collegial dynamic was also evident at the hearing, with Republican appropriators open to sweetening the bill by adding additional money for popular programs that appeal to members of both parties. Still, the committee rejected numerous Democratic amendments at the markup either by voice or recorded vote. They included an amendment from Rep. Mike Quigley (D-IL), rejected 31-29, that would have explicitly barred any use of funds to close EPA regional offices; an amendment from Rep. Matt Cartwright (D-PA) that would have removed bill language delaying implementation of the 2015 ozone standard; another Cartwright amendment, rejected 21-29, that would have instructed agencies to prepare for climate impacts.

48. VW Judge Says He Will Approve 3-Liter Diesel Cheating Accord

A U.S. judge said he intends to give final approval to Volkswagen AG's \$1.225 billion settlement with regulators and about 78,000 drivers of premium Audis, VWs and Porsches over the company's diesel cheating-scandal.

All told, VW is committed to spending upwards of \$24.5 billion in North America to settle lawsuits and buy back or repair some 560,000 vehicles armed with algorithms intentionally installed to trick emissions tests. The accord presented May 11 for sign-off by U.S. District Judge Charles Breyer in San Francisco includes an additional \$327.5 million that covers claims against technology provider Robert Bosch GmbH.

The agreement requires VW to compensate owners of 3-liter diesel engine vehicles, fix about 58,000 cars and buy back as many as 20,000 Touareg and Audi Q7 sport-utility vehicles. While the carmaker is on the brink of resolving the vast majority of consumer and government agency claims against it in the U.S., the company still faces criminal investigations and investor cases in Germany, the U.K. and elsewhere.

Owners of unfixable cars will be eligible for cash compensation of as much as \$13,880 in addition to a buyback, according to a statement from the plaintiffs' lawyers. Drivers with vehicles that can be brought up to standard could receive as much as \$16,114.

In April, a federal judge in Detroit approved VW's agreement to pay a \$4.3 billion penalty for misleading U.S. regulators and customers. That includes \$1.5 billion in civil penalties issued by the federal government and a guilty plea for conspiring to defraud regulators, obstruction of justice and making false statements.

Breyer said at a hearing May 11 he intends to issue a written order finalizing the three-liter settlement by May 17.

49. EPA Vehicle Emission Lab in Ann Arbor Gets High Marks For Cost Cutting



The U.S. EPA National Vehicle and Fuel Emissions Laboratory in Ann Arbor, shown here was part of an initiative called the Federal Green Challenge and recognized for cutting costs.(Melanie Maxwell | The Ann Arbor News)

Ann Arbor's National Vehicle and Fuel Emissions Laboratory has been recognized for cutting costs and improving use of resources as part of the U.S. EPA's Federal Green Challenge. Individual actions by the National Vehicle and Fuel Emissions Laboratory, 2565 Plymouth Road, include cutting paper purchases by 66 percent through increased use of electronic documents and displays and heightened access to Wi-Fi.

The Federal Green Challenge calls on facilities across the country to track progress toward the sustainability goals outlined by the EPA, like reducing costs of building operations and supplies.

The National Vehicle and Fuel Emissions Laboratory is one of 28 locations recognized for achievements related to the Federal Green Challenge in 2016. It was specifically recognized for its purchasing efforts. The laboratory is part of the Office of Transportation and Air Quality and provides emission testing services for motor vehicles, heavy-duty engines and non-road engine programs.

There were 264 facilities that participated in the Federal Green Challenge in 2016. It is the fifth year for the initiative, which is part of EPA's Sustainable Materials Management program.

According to the EPA website, the Federal Green Challenge in 2016 reduced fuel consumption by more than 500,000 gallons, sent 310 tons of electronics to certified recyclers, saved 9.2 million gallons of industrial water and diverted 336,000 tons of waste from landfills.

EPA Administrator Scott Pruitt said in a statement that efforts by federal agencies have resulted in estimated cost savings of \$17 million. "Federal agencies across the country are doing their part to minimize their environmental impact, in doing so saving American taxpayers millions of dollars," Pruitt said in the statement.

50. Eyeing January Proposal, EPA Pushes Ahead With Aircraft GHG Standards

EPA is pushing ahead with developing greenhouse gas standards for new aircraft engines consistent with a global pact on reducing aircraft GHGs, a move that runs counter to the administration's many efforts to roll back energy-sector GHG rules and ultimately could make it more difficult for Trump officials to target EPA's GHG endangerment finding.

Agency science advisers confirmed EPA's continued work on the issue and offered a brief update of the aircraft regulation during a June 29 teleconference, though they are urging officials to bolster the peer review process for scientific and economic analyses that will form the basis of the pending regulation.

The regulation under Clean Air Act section 231 would implement a certification standard for new and in-production aircraft engines agreed to last year by the International Civil Aviation Organization (ICAO). The ICAO Council formally adopted the standard in March.

ICAO separately adopted a "market-based measure" to limit GHGs from existing aircraft, though implementation of that could require new legislation and might not have a major EPA role.

The global treaty requires EPA's rules for new aircraft to be at least as stringent as its carbon dioxide standard -- though environmentalists have charged that the requirements are far too weak and that EPA should adopt tougher rules. The Obama administration had jumpstarted the process, issuing a GHG endangerment finding for the sector last summer and an advanced notice of proposed rulemaking outlining the ICAO process.

According to members of EPA's Science Advisory Board (SAB) during their recent meeting, the agency currently plans to issue a proposed rule in January and finalize it by the end of 2018.

Under air act section 232, the Federal Aviation Administration (FAA) must enforce EPA's emission standards, and it would be required to finalize its own rules on that issue after EPA completes its work.

"The EPA schedule has been developed in consultation with the FAA, and reflects the need for both agencies to act prior to the January 2020 implementation date for the international aircraft CO2 standards," says an agency summary of the pending regulation contained in an SAB memo.

It had been unclear if the Trump administration would move forward with the process, given its high-profile efforts to target several Obama-era climate regulations covering the utility and oil and gas sectors. EPA Administrator Scott Pruitt and other Trump officials have also consistently questioned mainstream scientific findings on human-caused climate change.

But EPA efforts to implement the ICAO CO2 standard are backed by the aircraft sector. In February, industry presented a "business case" for the effort, arguing it is less controversial than carbon controls for other sectors. The ICAO deals for the sector are also broadly consistent with an industry-wide goal of carbon-neutral growth by 2020.

If the agency does move forward with the rules, that would imply that it would not seek to target its GHG endangerment finding for aircraft that was finalized last summer. That finding created the legal requirement for the agency to issue GHG standards for aircraft. The aircraft endangerment finding uses similar scientific reports as EPA's landmark 2009 GHG risk finding to show that GHGs are the primary contributor to climate change. However, the new finding incorporated newer climate science reports, as well as sector-specific data to show that aircraft emissions are a significant contributor of GHGs.

Because the two risk findings rely on similar climate science, leaving the aircraft finding in place likely would make it more difficult to target the 2009 finding that forms the basis for nearly all other EPA climate rules.

Several hard-line conservatives and coal executives have urged Pruitt to scrap the finding, though many observers say such an effort would be doomed to fail in the courts because it would be difficult for EPA to produce enough credible scientific evidence to counter the mainstream scientific consensus around human-caused climate change.

The EPA summary in the SAB memo adds that the agency is developing two "scientific products" that will inform the rule: an aircraft GHG inventory including historic and projected emissions from 2010-2040 that will inform the rule's emissions impact, as well as an update to a 2015 report that will serve as a "technological feasibility and cost analysis" for emission reduction technologies for the sector.

The summary said that EPA had planned to begin a peer review of those two documents this spring and complete it by the end of the summer. However, that timeline has slipped. EPA currently plans to solicit feedback from three peer reviewers for each document, and the two panels would not communicate with each other.

However, the SAB in its memo says "ensuring the scientific integrity of these initial rules is of high importance" because they "will impact a significant portion of the global aircraft industry and will provide the framework for any changes moving forward." As such, the board is recommending a "more integrative approach to a scientific review." Noting the tight timeline for the regulation, SAB says it "wishes to provide advice on this issue or at a minimum the EPA should conduct a panel review that allows communication across the two proposed panels in order to encourage synergistic understanding among the disciplines involved."

51. EPA Proposes To Maintain 2018 RFS Targets But Lowers Cellulosic Volumes

EPA's just-released 2018 renewable fuel standard (RFS) proposal calls for maintaining 2017 requirements that in effect call for blending 15 billion gallons of conventional, corn-based, renewable fuel -- though the plan would also use EPA's waiver authority to lower volumes for low-carbon cellulosic biofuel below legislative targets.

The proposal, released July 5, serves as the Trump administration's first explicit policy statement on the RFS, though given the Cabinet's divergent views on the program, it appears to make few major changes from what the Obama administration had set in 2017.

Given that the administration maintained the 15 billion gallon target for conventional ethanol, the proposal may provide a slight boost to the renewable fuel industries, though both the renewables and the oil industries said the proposal does not go far enough in their preferred directions.

“While we are pleased with the EPA and administration’s commitment to a 15-billion-gallon target for conventional biofuels, we would like to see final levels for cellulosic and advanced biofuels continue to give producers and stakeholders certainty in their investment in second generation technology,” Emily Skor, CEO of the ethanol group Growth Energy said in a statement.

The American Petroleum Institute (API) “welcomed” EPA’s proposal to slightly reduce the total biofuel volume required for 2018, though it adds the agency “does not go far enough.” “Studies show that higher ethanol volumes under the RFS would raise fuel costs for consumers and damage car engines. Today’s proposal reaffirms the importance of RFS reform, as it is essential that Americans have access to fuels they want and can safely use in their vehicles,” API’s Frank Macchiarola said in a statement. “Congress must fix this broken, outdated program.”

Under the RFS, refiners and importers must blend increasing volumes of lower-carbon, renewable fuels into the transportation and heating fuel supply, according to statutory volumes which the agency has the authority to waive under certain conditions. But the agency’s annual targets for various fuels -- especially cellulosic ethanol, which must have a 60 percent lower carbon footprint than conventional gasoline -- have become pitched battles between renewable fuel advocates and the oil industry as supply has fallen short of the targets, forcing obligated parties to purchase costly credits to offset the shortfalls.

Broadly, EPA’s proposal maintains requirements for refiners to blend 15 billion gallons of conventional renewable fuel as the agency did in its 2017 targets, when the Obama EPA restored the “implied” volume of conventional, corn-based ethanol to the statutory level. There is no explicit corn ethanol production mandate under the RFS, but most of the overarching “total renewable fuel” category is still satisfied by the fuel, despite Congress’ intent to move toward more cellulosic ethanol.

For the 2016 compliance year, the last administration waived statutory provisions that required the 15 billion gallon target, instead requiring only 14.5 billion gallons. But the provision is currently subject to litigation in federal appeals court, where judges expressed skepticism about the agency’s justification for the waiver.

While EPA generally maintained statutory targets for conventional renewable fuels, the agency proposes to waive provisions in the RFS law to reduce the level of cellulosic biofuel required -- from 311 million gallons in 2017 to 238 million gallons for 2018.

EPA also proposes to slightly reduce the volume requirements from 2017 levels for advanced biofuels, which must have a 50 percent smaller carbon footprint than conventional gasoline, from 4.28 billion gallons to 4.24 billion gallons, and for total renewable fuel, from 19.28 billion gallons to 19.24 billion gallons.

The agency said in a statement that it was lowering volumes given producers’ inability to supply fuels at higher targets. “Real-world challenges, such as the slower-than-expected development of the cellulosic biofuel industry, have slowed progress towards meeting Congressional goals for renewable fuels, even as progress has been made in some areas,” EPA writes in the proposal.

For biomass-based diesel, EPA’s proposal maintains the level of the 2018 standard for 2019, keeping the requirement at 2.1 billion gallons.

“We are proposing new volumes consistent with market realities focused on actual production and consumer demand while being cognizant of the challenges that exist in bringing advanced

biofuels into the marketplace,” says EPA Administrator Scott Pruitt in a statement. “Timely implementation provides certainty to American refiners, the agriculture community and broader fuels industry, all of which play an important role in the RFS program.”

According to EPA’s statement, the proposed volumes “are based on requirements under the law and an analysis of current market dynamics, including energy demand, biofuel production and market constraints.” The release also says the proposal “will help stabilize the renewable fuels program and provide certainty for stakeholders.”

Alongside setting the new volume levels, EPA’s proposal says the agency will begin technical analysis “that will inform a future rule to reset the statutory volumes for cellulosic, advanced, and total biofuels,” according to the release.

EPA will also take comment on how to address concerns that RFS obligations are being increasingly met using imported fuel from countries like Brazil, Argentina and Indonesia. The release notes EPA is also “assessing higher levels of ethanol-free gasoline and bolstering an existing memorandum of understanding with the U.S. Commodity Futures Trading Commission (CTFC) to analyze and address a host of market concerns, including the need for increased transparency.”

52. Canada Aligns Locomotive Pollution Rules with U.S. Standards

Locomotives in Canada face progressively more stringent air pollution limits as the country better aligns its rules with current U.S. standards. The regulations, which take effect immediately, require Canadian railways, including major national railways Canadian National Railway Co. and Canadian Pacific Railway Corp., to use locomotives that meet stringent emissions standards, but offer flexibility to limit impacts on small railway operators.

The locomotive emissions regulations set for the first time mandatory standards for emissions by locomotives of air pollutants such as nitrogen oxides, particulate matter, hydrocarbons, carbon monoxide, and sulfur oxides, as well as for the opacity of smoke, the government said June 28.

Transport Canada said in a regulatory impact analysis published with the regulations that almost all new locomotives in Canada are imported from the U.S. and meet those standards and the regulation will provide consistency for companies that operate on both sides of the border.

The regulations are expected to cost Canadian railways C\$157 million (\$121 million) between 2015 and 2024, but will generate C\$245 million (\$189 million) in benefits during the same period due to reductions in nitrogen oxides and particulate matter.

Transportation accounted for about 56 percent of total Canadian emissions of nitrogen oxides in 2013 and 9.2 percent of particulate matter emissions. Of the sector total, rail accounted for 11.1 percent of nitrogen oxides emissions and 4.6 percent of particulate matter emissions.

Small railway companies with gross annual revenues of C\$30 million (\$23 million) would be exempted for remanufactured locomotives they operate for freight or tourist services.

The regulations under the Railway Safety Act replace voluntary agreements with the rail sector in place since 1995. They were revised since proposal in response to industry concerns. The revisions include new exemptions for U.S. railway companies with incidental operations in Canada, provisions allowing locomotives to idle for more than 30 minutes during diagnostic testing

or to provide power for passenger cars to protect health and safety, simplified reporting requirements, and provisions to align with alternate carbon monoxide and particulate matter standards adopted by the U.S. EPA in 2016 for natural gas locomotives.

Transport Canada rejected comments suggesting that the regulations also should limit greenhouse gas emissions from the rail sector, noting that those will be addressed under the Pan-Canadian Framework on Clean Growth and Climate Change announced in December 2016.

ASIA-PACIFIC

53. New Beijing Chief Vows to Finally Win Fight Against Pollution

Beijing's new top official has vowed to tackle the city's smog problem, a simmering cause of discontent among China's expanding middle class. Cai Qi, the Communist Party chief in the capital, told a gathering of local delegates June 19 that the metropolis of 22 million must slash pollution levels to "win the battle against pollution." He pledged to cut levels of the most hazardous airborne particulate by 30 percent over the next five years, while pushing polluters and "non-essential" services out to "display the image of a major country's capital city."

The speech to Beijing's municipal party congress—one of dozens of regional meetings being held ahead of a planned reshuffle of the national leadership later this year—comes less than a month after Cai's promotion. A former subordinate of President Xi Jinping, Cai, 61, is among the local leaders being watched for possible advancement at the upcoming gathering, in which scores of top political officials are expected to be replaced.

Beijing's leaders for years have been frustrated in efforts to clear chronic pollution that has prompted criticism on social media, unflattering global headlines and occasional safety alerts. Former Mayor Wang Anshun, who vowed in 2014 to present his own head to the Chinese leadership if smog wasn't brought under control by 2017, was far short of the goal when he was transferred to another job in October. Wang had also once described Beijing as "not a livable city."

Li Shuo, a Beijing-based adviser at Greenpeace East Asia, said the fight against pollution was at a "critical juncture" and required a more coordinated response from regional authorities. Cai outlined a series of air pollution targets in January during a stint as Beijing's mayor, the city's No. 2 post.

"A concerning situation started from late last year, when the trend toward improving air pollution seemed to be put on hold, a trend very much linked to ramped-up industrial activities," Li said. "A lot of the efforts and progress made during the past few years could be reversed unless there are real measures on the ground."

Despite some improvement, Beijing's pollution readings often reach 10 to 20 times the World Health Organization's recommended maximum day-long exposure limit. Even a 30 percent reduction over the next five years would leave average pollution levels above that mark.

Chinese officials have urged patience amid growing public frustration. In March, Premier Li Keqiang said the government planned to "make the skies blue again," echoing Xi's earlier vow to fight pollution with an "iron hand."

Cai's plans dovetail with existing efforts to cap Beijing's population and fuse the capital with the adjacent regions of Tianjin and Hebei, for a region of 130 million people. In April, the government

announced efforts to build a city called the Xiongan New Area about two hours to the south of the capital, drawing state-owned enterprises and property speculators to what's now a sleepy backwater known for its orchard and lotus flowers.

Like other regional party chiefs, Cai, pledged loyalty to Xi, whom he had served under for much of the past two decades. "We must use his speeches as a constant reference, understand their essence, and follow the guidance in all aspects of our work," Cai said.

Xi was designated the party's "core" leader in October, enhancing his ability to push his agenda and promote favored officials during the upcoming reshuffle, scheduled for the fourth quarter of the year. The event will determine his ability to preserve his influence into the next decade.

Cai was named acting Beijing mayor last year after serving on Xi's National Security Commission. He previously worked in the eastern province of Zhejiang and southeastern Fujian while Xi held leadership roles there. Since 1991, all Beijing party secretaries have held seats on the elite 25-member Politburo.

54. China Warns Pollution-Plagued Cities to Step Up Enforcement

China's government has warned 19 major cities to enforce laws and regulations after finding none of the cities—despite worsening environmental quality—had any violations of the country's Environmental Protection Law in the first quarter of 2017.

The situation ran counter to a nationwide trend of a rise in the number of instances that local environmental, public security and prosecutorial bureaus across the country are separately pursuing, according to remarks posted May 2 on the environmental protection ministry's website from Tian Weiyong, head of environmental supervision bureau.

Nearly 5,000 environmental criminal cases occurred in the first quarter—a 195 percent increase compared to the first three months of 2016, Tian said.

The cities with no Environmental Protection Law violations were in the provinces or autonomous regions of Hebei (Qinhuangdao, Zhangjiakou, and Chengde), Guangdong (Maoming, Qingyuan), Liaoning (Fushun, Tieling), Jilin (Jilin City, Baishan, Siping, and Songyuan), Heilongjiang (Jiamusi, Qitaihe, and Suihua), Guangxi (Liuzhou, Baise), Gansu (Dingxi) and Ningxia (Yinchuan, Zhongwei).

Tian said local environmental and other authorities had fined companies in 224 cases in the first quarter, with a total of 26 million yuan (\$3.7 million) in daily accumulating penalties given out to companies between the time their violation was found and the time they rectified the problem.

One incident involved a recycling company in Chengdu, Sichuan province. Mengyi Recycling was found to have collected a large amount of waste batteries that led to heavy soil pollution where the batteries were stored. The case has been transferred to the local public security.

In more than 1,200 cases, companies were ordered to halt or limit production. And in 387 instances, environmental bureaus transferred cases to public security for criminal investigation.

China is a month into a year-long pollution inspection campaign that focuses largely on provinces in the northeast around Beijing, where much of the air pollution that plagues the capital originates.

On May 1 alone, inspection teams checked around 240 businesses in Beijing and nearby provinces and found 69 percent with environmental violations. The environment ministry has been releasing near-daily reports on the inspections since early April, with the percentage of violations hovering around 70 percent of the companies inspected.

2017 also marks the final year of an air pollution action plan launched in late 2013, which has focused on improving air quality in areas around Beijing, Shanghai and the Pearl River Delta in Guangdong province. Authorities have said most large and medium-sized companies in these areas have improved controlling their emissions. But they said a larger number of small and less-regulated factories—which China calls “scattered pollution sources”—remain a concern in the latest inspection campaign.

Also on May 2, Beijing separately announced that it would pay citizens up to 50,000 yuan (\$7,200) in rewards for information on environmental violations if the information proved to be accurate.

55. Global Automakers Call On China to Ease "Impossible" Electric Car Rules

Global automakers have urged China to delay and soften planned quotas for sales of electric and hybrid cars, saying its proposals will be impossible to meet and would severely disrupt their businesses. A June 18 letter addressed to the head of China’s Ministry of Industry and Information Technology, is the most cohesive pushback yet from the industry against ambitious targets for so-called new energy vehicles in the world’s biggest auto market.

Keen to combat air pollution, China is planning to set goals for electric and plug-in hybrid cars to make up at least a fifth of Chinese auto sales by 2025, with a staggered system of quotas beginning in 2018.

Beijing also sees the policy as a means to help the domestic car industry to compete with foreign rivals that have decades more experience in internal combustion engines.

The strict new rules plus planned harsh penalties for non-compliance, such as the cancellation of licenses to sell non- electric cars in China, has the potential to cause much pain for some automakers in the market.

"This will hit the industry pretty hard, especially well-known companies," said Liping Kang, senior manager at the Innovation Center for Energy and Transportation, a Beijing-based think tank.

Although Chinese Premier Li Keqiang and German Chancellor Angela Merkel agreed last month that concessions would be made, the ministry later released draft regulations upholding the strict sales quotas.

"The proposed rules' ambitious enforcement date is not possible to meet," the letter from U.S., European, Japanese and Korean auto industry bodies said. "At a minimum, the mandate needs to be delayed a year and include additional flexibilities." The targets demand firms sell electric or plug-in hybrid vehicles to generate "credits" equivalent to 8 percent of total sales by 2018, 10 percent by 2019 and 12 percent by 2020.

The auto industry bodies also asked for China to reconsider some of the penalties for not achieving the quotas, such as plans to ban carmakers from importing and producing non-new energy vehicles altogether.

They also called for equal treatment of Chinese and foreign makers. Currently foreign carmakers are excluded from getting full subsidies for new energy vehicles and batteries, leaving manufacturers such as Tesla (TSLA.O) at a disadvantage. "This preference for domestic automakers over import automakers undermines the environmental goals of the regulation, puts imports at a competitive disadvantage, and risks opening China up to international trade disputes," the letter said.

Chinese manufacturers are the biggest producers of electric vehicles worldwide, making 43 percent of the total last year, according to consultancy McKinsey & Co.

The letter was signed by the American Automotive Policy Council, the European Automobile Manufacturers Association, the Japan Automobile Manufacturers Association and the Korea Automobile Manufacturers Association.

European carmakers such as Daimler have responded to the Chinese proposals by announcing plans to ramp up local production of electric cars, while Tesla has said it is in talks with the Shanghai Municipal government to try to avoid a 25 percent tariff on imported vehicles.

Foreign manufacturers also want more credit given to plug-in hybrid cars, and for carmakers to be allowed to "bank" credits accrued from already sold cars as well as to "carry forward" credits into subsequent model years.

56. China Likely to Extend Tax Break on Electric Cars, Auto Group Says

China is likely to extend a purchase-tax exemption on electric cars to promote the vehicles, whose sales have outpaced broader industrywide deliveries, according to the state-backed auto association.

The exemption on the 10 percent purchase tax is due to expire at the end of this year and is "highly likely" to be renewed, Xu Yanhua, deputy secretary-general of the China Association of Automobile Manufacturers, said at a briefing in Beijing July 11. An extension to a levy exemption would probably benefit electric-car manufacturers like BYD Co. and BAIC Motor Corp., which produce some models qualifying for the exemption.

Sales of passenger new-energy vehicles, including plug-in hybrids and battery-electric cars, rose 36 percent to 164,000 units in the first six months of this year. That compares with a 1.6 percent gain in overall auto sales, according to data released by CAAM. A separate set of figures from the China Passenger Car Association July 11 showed first-half retail sales of vehicles falling for the first time since 2005.

China has given subsidies for companies and consumers to promote the development and sale of electric vehicles as part of its strategy to reduce a reliance on imported oil and cut air pollution. The country is the biggest electric-car market, accounting for more than 40 percent of such cars sold in the world, according to a report by the International Energy Agency.

57. Car Ownership Continues To Grow In China

The latest figures from China's transportation authorities show that the country owns 304 million cars, with 371 million people with registered driver's licenses. Car ownership is growing at breakneck speed, with 16 million new vehicles added in the first six months of this year. In 23

cities, car ownership has exceeded 2 million while private car ownership reached 168 million, nationally.

Beijing, Chengdu and Chongqing are the cities with the most automobiles on the road. The government is investing in infrastructure and handing out cash incentives to encourage the intake of electric cars.

58. Australia to Phase Down Refrigerant Greenhouse Gases

With the backing of both major parties, the Australian Senate passed legislation to gradually reduce imports of potent greenhouse gases that are commonly used as refrigerants. The Ozone Protection and Synthetic Greenhouse Gas Management Legislation Amendment Bill 2017 will result in an 85 percent reduction in imports of hydrofluorocarbon gases (HFCs) by 2035.

The Senate's endorsement of the legislation follows its June 13th passage through the House of Representatives.

The bill will become law after Governor-General Peter Cosgrove completes the ceremonial step of Assent in the next few weeks.

HFCs are commonly used in refrigeration and air conditioning systems, and some are thousands of times more potent than carbon dioxide.

Australia does not manufacture HFCs domestically, and instead relies entirely on imports.

The commitment in the bill to phase down imports of HFCs is in line with Australia's acceptance of the 2016 Kigali Amendment to the Montreal Protocol, which established a global agreement to reduce the use of the gases.

Australia's phase-down will be implemented starting in 2018 and will gradually tighten annual caps on the amount of new HFCs permitted to be imported in bulk.

The cap won't apply to HFCs imported in equipment such as air conditioners or refrigerators, as the Kigali Amendment makes the countries where these items are manufactured responsible for accounting for these gases.

Bulk imports make up two-thirds of the total amount of HFCs imported into Australia.

According to an explanatory memorandum, the bill is expected to indirectly lead to a reduction in the use of HFCs in imported equipment, once manufacturers recognize that the country is moving to alternative gases.

Federal Environment and Energy Minister Josh Frydenberg, who introduced the bill in the House of Representatives June 19, welcomed its passage through the Senate and noted that Australia had co-chaired the Montreal Protocol negotiations in Kigali, Rwanda, that led to the amendment on HFCs.

Refrigerants Australia, the industry association representing refrigerant suppliers and users, also welcomed passage of the bill. It will result in better performing refrigeration and air conditioning systems, and deliver significant reductions in emissions, the association's executive director, Greg Picker, in a June 19 statement.

59. Australia Drives for Stricter Fuel Efficiency, Automakers Resist

The Australian government is considering a fuel efficiency standard for new light vehicles that has angered the association representing companies including Toyota, Volkswagen and Ford, but pleased climate advocacy groups.

The Liberal-National Party Coalition government led by Prime Minister Malcolm Turnbull has proposed, in a paper sent July 10 by the federal Department of Infrastructure and Regional Development to key interest groups, a new light vehicle fleet average of 105 grams of carbon dioxide per kilometer, which would be fully phased in by 2025. The department has not yet posted the paper on its website nor has it confirmed it will implement the proposal.

Australia is currently one of the few developed countries that lacks light vehicle efficiency standards. (See ICCT story below.) Under the proposal, companies would report sales and efficiency levels starting in 2020. In 2022, 65 percent of vehicle sales would have to comply with the standard, rising to 100 percent by 2025.

To provide some flexibility, the companies would be allowed to average fleet emissions over three years. Compliance would be determined by giving companies a credit for each vehicle that is at or under the standard, and issuing a debit for each one that is above it. Companies would be in compliance if they had at least as many credits as debits at the end of each calendar year.

To encourage ultra-low emission vehicles such as electric cars, extra credits would accrue. For example, a vehicle producing zero carbon per kilometer would accrue three credits, while the sale of a car producing between one and 30 grams per kilometer would earn two credits.

The standard would adopt the new Worldwide Harmonized Light Vehicles Test Procedure—which is expected to be adopted by the end of 2019—as the basis for measuring vehicle efficiency.

The Australian Chamber of Automotive Industries—which represents car makers including the Australian operations of BMW, Ford, Honda, Hyundai, Mercedes-Benz, Toyota and Volkswagen—criticized the proposal. “We are hugely disappointed,” Tony McDonald, the chamber’s acting chief executive, told reporters July 12. McDonald said the government shouldn’t specify a carbon standard until it has strengthened fuel quality standards, adding that the government should also take into account “Australian consumers’ predisposition to purchase heavier vehicles.” These matters influence “what you can do to achieve a CO₂ outcome,” he said.

The chamber is advocating options for the efficiency standard that would result in the new vehicle fleet still being above 105 grams carbon dioxide per kilometer in 2030.

Think tank ClimateWorks Australia welcomed the proposal, however. ClimateWorks implementation manager Scott Ferraro told reporters July 12 that the proposal followed extensive consultation. Ferraro said a draft regulatory impact statement the government issued last December considered several possible standards and found that the 105 grams option would deliver net benefits of A\$13.9 billion (\$10.63 billion) by 2040, due mainly to fuel savings. He also disputed that the standard could only be implemented in conjunction with improved fuel quality standards.

This argument had been debunked by the International Council on Clean Transportation in its submission to the federal government’s consultation process on the proposed standard, he said.

The council's comments said that Australia could meet the 105 grams standard "based on the current fuel quality we've got," Ferraro said.

According to the council's submission, the present fuel quality in Australia "is not a hindrance to lowering CO2 emissions from new light vehicles."

"While gasoline sulfur content in Australia should be brought down to 10 parts per million over time in view of reducing noxious emissions, lack of availability of ultra-low sulfur or extra high-octane gasoline should not become an excuse for delaying action on light vehicle CO2 standards," the council said.

60. New Zealand Exempts Road Fees for Heavy Electric Vehicles

New Zealand is exempting heavy electric vehicles from road use charges, a move that could save some truck drivers thousands of dollars a year.

A measure passed by Parliament June 27, which became law the next day, added large electric delivery trucks, buses and vans to the incentives already enjoyed by the country's few drivers of electric passenger cars. It also grants all electric vehicles free access to high-occupancy lanes and bus lanes.

The Ministry of Transport estimates annual savings at NZ\$2,480 (\$1,806) for a medium-sized two-axle delivery truck, NZ\$5,560 (\$4,049) for a two-axle waste truck and NZ\$6,140 (\$4,472) for a trolley bus.

The value of the existing road user charge exemption for electric passenger cars is about NZ\$558 (\$406) a year.

Heavy electric vehicles, defined as any vehicle with a maximum gross weight of more than 3.5 metric tons, will be exempt from road charges until they comprise 2 percent of the heavy vehicle fleet. This would match arrangements already in place for light electric vehicles (up to 3.5 metric tons), which exempt them from road user charges until they make up 2 percent of the light vehicle fleet.

While New Zealand has about 4 million cars and trucks on its roads, fewer than 4,000 are electric vehicles, according to government figures. The country has set a goal of reaching 64,000 electric vehicles by 2021. In 2016, it had only 60 registered heavy electric vehicles, 57 of them electric trolley buses that operate in Wellington, the capital.

The ruling National Party introduced the measure, "an important part of the government's work to improve the efficiency of our energy use and to meet our climate change commitments," minister for energy and resources Judith Collins told Parliament.

But some lawmakers said the changes don't do enough to encourage electric vehicle use. "This is standing-still legislation," said Labor member of Parliament Megan Woods. "It is not putting in place the kind of transformational change that will see the uptake of EVs happen faster," Woods told Parliament.

61. Toyota, Nissan, Honda to Lead Japan's Hydrogen Station Coalition

Eleven leading Japanese companies including Toyota, Nissan and Honda said they will collaborate to build more hydrogen stations to accommodate fuel cell motor vehicles in Japan.

While the government has a target of 160 hydrogen stations serving 40,000 fuel cell vehicles by 2020, just 90 hydrogen stations are currently in operation—and slightly more than 1,000 fuel cell vehicles on Japanese roads, according to government statistics and the Japan Automobile Manufacturers Association.

The companies are Toyota Motor Corp., Nissan Motor Co., Honda Motor Co., JXTG Nippon Oil & Energy Corp., Idemitsu Kosan Co. Ltd., Iwatani Corp., Tokyo Gas Co., Toho Gas Co. Ltd., Air Liquide Japan Ltd., Toyota Tsusho Corp., and the Development Bank of Japan Inc., they said in a May 19 announcement.

The cost of building a hydrogen filling station is more than twice the cost of building a gas station, the Japan Automobile Manufacturers Association said.

62. Vietnam Air at ‘Danger Point’ Could Threaten Economic Revival

Vietnam is famously teeming with motorbikes that carry an air pollution double whammy: The fumes they discharge are largely unregulated, and they’re often breathed in by riders on packed city roads.

And plenty of other factors are conspiring against healthy lungs in one of the most polluted and fastest-growing countries on Earth, including coal-fired power, mushrooming factories and rampant construction in a country with an economy growing about 6 percent annually.

But as their skies get grayer, Vietnamese debate whether they must pollute their way to prosperity. “We reach to the tipping point,” Nguy Thi Khanh, founder of environmental nonprofit GreenID, said at an air quality panel this month. Vietnam sits near the bottom of Yale’s 2016 Environmental Performance Index for dirty air, at spot 170 out of 180 nations. “That’s why people wake up and recognize that we are at the danger point,” she said.

Does the communist country need to pass new regulations to protect its environment, or simply expand the ones in place like its gas tax? Should it focus on companies? Or should its 92 million citizens be encouraged to spend more time walking or take public transit?

Vietnam is the world’s No. 2 motorbike market, with 86 percent of households owning a motorbike, second only to Thailand’s 87 percent, Pew Research reported in 2015.

Riders spend an hour long commute inhaling ashy plumes from motorbikes just feet away. So it’s no wonder many Vietnamese riders wear masks to filter some of the dust from exhaust. Down alleyways, on buses, even inside cafes, masks are nearly as ubiquitous as the motorbikes.

But one day in March 2016, Hanoi’s air quality index hit a daily reading above 300—placing the capital’s pollution at a level worse than Beijing’s.

And if Vietnam follows through on plans to nearly quadruple its coal-fired power plant generating capacity over the next 13 years, the country faces the prospect of 189 deaths per million people linked to coal by 2030, according to a study Harvard-co-authored in January. That would be more than double the next highest figure, of 85 deaths per million in 2030 projected for Indonesia, said the study.

With most of that coal-powered electricity feeding the appetite of industrial users, policy makers are taking steps that could lead to a tax on companies' greenhouse gas emissions. Vietnam National University associate professor Ho Quoc Bang is helping draft a government circular to create a national inventory of emissions. The database will comprise regular reports from businesses in six categories: steel, cement, electricity, petrochemicals, chemicals and major users of industrial boilers. The Ministry of Natural Resources and Environment will cap and levy emissions based on this inventory, he said.

In Vietnam's commercial core, Ho Chi Minh City, local authorities want 90 percent of industrial polluters to install air treatment systems by 2020. The official plan also targets a 70 percent reduction in air pollution by that date.

Many of those efforts will focus on traffic, which Bang said delivers 80 percent of the megacity's haze. Corporations play a bigger role in air pollution nationwide, but at a local level, urbanites inhale sooty air first from vehicles.

Both in Ho Chi Minh City and Hanoi, Vietnamese have debated a motorbike ban. But Vietnam has no subway system, and the majority of residents get around on two wheels. More realistic solutions include ride-sharing, establishing subway systems in the two biggest cities, issuing air pollution alerts and raising a gas tax. But gas surcharges tend to hurt poor residents, who typically spend a larger portion of their income on fuel. The current tax runs as high as 4,000 Vietnam dong (18 cents) a liter, but policy makers are considering a rate as high as 8,000 dong.

"Tax for fuel is not so important as controlling emissions from motorcycles," Bang said at the air quality panel, which the U.S. consulate in Ho Chi Minh City hosted. "Right now, we don't have smog checking for motorcycles." The government will begin inspections of new motorbikes in 2020. Cars already undergo emissions checks.

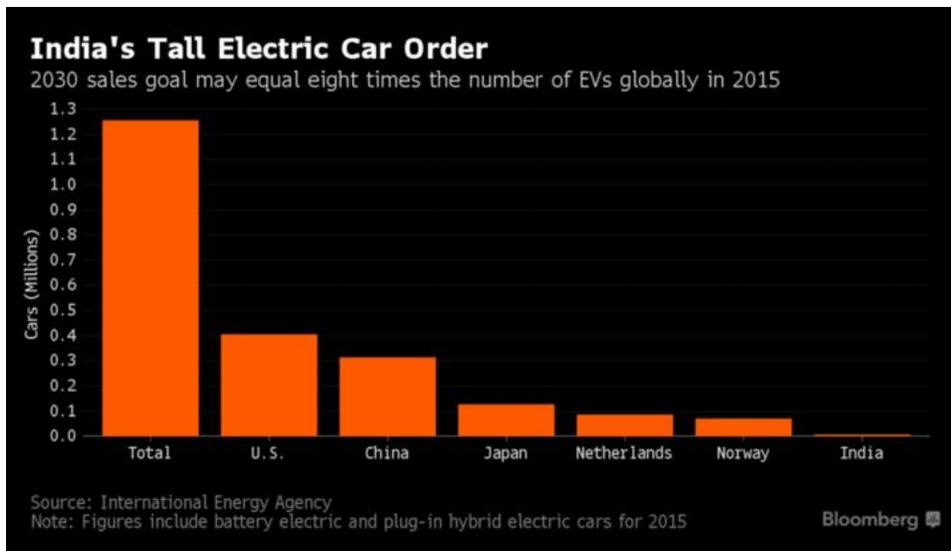
And Grab, the main competitor of Uber in Vietnam, just released a carpooling option onto its smartphone app this month. Ho Chi Minh City is the first guinea pig.

GreenID's Khanh said much stronger action is needed. "I think having a clean air act is urgent," she said. She discussed the proposed law at a workshop recently hosted by the National Assembly and said many attendees, including lawmakers, backed the idea. To that end, Vietnam is collecting data on indoor and outdoor pollution, greenhouse gases, particulate matter and regional air management.

It passed an Environmental Protection Tax in 2010, an Environmental Protection Law in 2014, and a National Action Plan on Air Quality Management in 2016. Vietnam also requires environmental impact reviews for certain business permits, but Khanh and Phu both said officials don't take the reviews seriously. "The priority is putting economic development, economic growth at all cost," Phu said, "and that is the problem."

U.S. consul general in Ho Chi Minh City, Mary Tarnowka, told the panel that from 1970–2014, the U.S. economy grew 240 percent, while average air pollution levels fell 70 percent. "Multiple countries and multiple cities around the world have been able to reduce air pollution," she said, "without sacrificing economic growth."

63. India Slashing Tax on Electric Cars to Boost Sales



India has lowered the levy it will charge on electric vehicles under a new goods and services tax, signaling a shift in policy that seeks to encourage adoption of e-cars over hybrid and conventional vehicles. Under the proposed tax regime rolled out July 1, electric vehicles will be taxed at 12 percent. Currently, they're taxed at

more than 40 percent, including excise duty and state taxes. The tax on batteries has been fixed at 28 percent.

Prime Minister Narendra Modi has asked a group of senior ministers to lead an initiative to ensure that by 2030 almost all vehicles in India are powered by electricity as a way to cut oil imports and pollution. And as a first step, the government has dropped the concessional duty rate on hybrids by combining them in the same tax bracket as vehicles powered by conventional fuel.

"This is a clear shift in government's past policy of promoting hybrid vehicles," said Abdul Majeed, a partner at Price Waterhouse. "Now the government is promoting electric vehicles instead of opting for a step-by-step policy." Original equipment makers will have to start domestic manufacturing of electric vehicles since there will be huge demand for such cars, he added.

Hybrid cars, which were earlier at par with electric autos, have now been clubbed in the same tax bracket as large or luxury cars, which are taxed at 28 percent, along with an additional levy of 15 percent. The government in 2015 started a program to boost the use of electric and hybrid vehicles by providing subsidies of as much as 138,000 rupees (\$2,135) for cars, with the goal to get up to 7 million such vehicles on the roads by 2020.

Sales of electric vehicles have been slow to pick up. A total of 111,897 vehicles, including 1,230 electric cars and 33,496 low-speed two-wheelers with conventional batteries, received incentives under the government program from April 1, 2015, through February, according to a government statement April 12.

India's potential plan to sell only electric cars by the end of next decade would require nearly eight times the global stock of such vehicles, according to the International Energy Agency. The country would need to sell more than 10 million electric cars by 2030, compared with the almost 1.3 million on the road worldwide in 2015, the agency said. The goal also equals 10 percent of the 2030 target for electric vehicles on the road globally agreed to in the Paris climate talks.

While the details are yet to be worked out, "it is an ambitious plan nonetheless," the IEA said. "Regardless, the exact formulation of the target and the extent of its long-term achievement, it is a good step that will help India to be among the global leaders in deploying a technology that is crucial to temper increasing oil import needs, local air pollution in cities, and limit CO2 emissions."

India's fast-growing economy and rising urbanization has set it on course as a key driver of global energy growth in the coming decades. While reaching the electric vehicle target would chop almost 10 percent of India's 2030 forecast oil use, the country would remain a key center of global consumption growth, second only to China, as road freight transport, petrochemicals and the residential sector continue to push demand higher, the IEA said.

The government would need to build more charging points and lower the cost of electric vehicles if it wants to achieve its goal, according to Tushar Bansal, director at energy consultancy Ivy Global Energy Pte. "The electric vehicles today can only go a limited distance before requiring recharging," Bansal said. "Because of the number of infrastructural additions and changes required, replacing gasoline cars with electric vehicles is expected to be a longer drawn-out affair as the market will take time to adjust."

India had close to 5,000 electric vehicles on the road by the end of last year, according to the IEA. That compares with the more than 3 million passenger vehicles sold in the country in the year that ended March 31, according to data from the Society of Indian Automobile Manufacturers.

Companies including Mahindra & Mahindra Ltd., Volvo Cars, BMW AG and Toyota Motor Corp. sell electric or hybrid cars in India. Mahindra offers its e2O Plus in Delhi at 626,387 rupees (\$9,724), not including taxes, according to its website. The cheapest gasoline powered car can be bought for about a third of that.

64. Unabated Climate Change Would Bring Devastating Consequences to Asia

Unabated climate change would bring devastating consequences to countries in Asia and the Pacific, which could severely affect their future growth, reverse current development gains, and degrade quality of life, according to a report² produced by the Asian Development Bank (ADB) and the Potsdam Institute for Climate Impact Research (PIK).

Under a business-as-usual scenario, a 6 degree Celsius temperature increase is projected over the Asian landmass by the end of the century. Some countries in the region could experience significantly hotter climates, with temperature increases in Tajikistan, Afghanistan, Pakistan, and the northwest part of the People's Republic of China (PRC) projected to reach 8 degree Celsius, according to the report.

These increases in temperature would lead to drastic changes in the region's weather system, agriculture and fisheries sectors, land and marine biodiversity, domestic and regional security, trade, urban development, migration, and health. Such a scenario may even pose an existential threat to some countries in the region and crush any hope of achieving sustainable and inclusive development.

"The global climate crisis is arguably the biggest challenge human civilization faces in the 21st century, with the Asia and Pacific region at the heart of it all," said Bambang Susantono, ADB Vice-President for Knowledge Management and Sustainable Development. "Home to two-thirds of the world's poor and regarded as one of the most vulnerable region to climate change, countries in Asia and the Pacific are at the highest risk of plummeting into deeper poverty — and disaster — if mitigation and adaptation efforts are not quickly and strongly implemented."

² "A Region at Risk: The Human Dimensions of Climate Change in Asia and the Pacific"

"The Asian countries hold Earth's future in their hands. If they choose to protect themselves against dangerous climate change, they will help to save the entire planet," said Professor Hans Joachim Schellnhuber, PIK Director. "The challenge is twofold. On the one hand, Asian greenhouse-gas emissions have to be reduced in a way that the global community can limit planetary warming to well below 2 degrees Celsius, as agreed in Paris 2015. Yet even adapting to 1.5 degrees Celsius temperature rise is a major task. So, on the other hand, Asian countries have to find strategies for ensuring prosperity and security under unavoidable climate change within a healthy global development. But note that leading the clean industrial revolution will provide Asia with unprecedented economic opportunities. And exploring the best strategies to absorb the shocks of environmental change will make Asia a crucial actor in 21st-century multilateralism."

More intense typhoons and tropical cyclones are expected to hit Asia and the Pacific with rising global mean temperatures. Under a business-as-usual scenario, annual precipitation is expected to increase by up to 50% over most land areas in the region, although countries like Pakistan and Afghanistan may experience a decline in rainfall by 20-50%.

Coastal and low-lying areas in the region will be at an increased risk of flooding. Nineteen of the 25 cities most exposed to a one-meter sea-level rise are located in the region, 7 of which are in the Philippines alone. Indonesia, however, will be the most affected country in the region by coastal flooding with approximately 5.9 million people expected to be affected every year until 2100.

Increased vulnerability to flooding and other disasters will significantly impact the region — and the world — economically. Global flood losses are expected to increase to \$52 billion per year by 2050 from \$6 billion in 2005. Moreover, 13 of the top 20 cities with the largest growth of annual flood losses from 2005-2050 are in Asia and the Pacific: Guangzhou, Shenzhen, Tianjin, Zhanjiang, and Xiamen (PRC); Mumbai, Chennai-Madras, Surat, and Kolkata (India); Ho Chi Minh City (Viet Nam); Jakarta (Indonesia); Bangkok (Thailand); and Nagoya (Japan).

Climate change will also make food production in the region more difficult and production costs higher. In some countries of Southeast Asia, rice yields could decline by up to 50% by 2100 if no adaptation efforts are made. Almost all crops in Uzbekistan, meanwhile, are projected to decrease by 20-50% by 2050 even in a 2 degree Celsius temperature increase (Paris Agreement scenario). Food shortages could increase the number of malnourished children in South Asia by 7 million, as import costs will likely increase in the subregion to \$15 billion per year compared to \$2 billion by 2050.

Marine ecosystems, particularly in the Western Pacific, will be in serious danger by 2100. All coral reef systems in the subregion will collapse due to mass coral bleaching if global warming increases by 4 degree Celsius (global business-as-usual scenario). Even with a 1.5 degree Celsius temperature increase, 89% of coral reefs are expected to suffer from serious bleaching, severely affecting reef-related fisheries and tourism in Southeast Asia.

Climate change also poses a significant risk to health in Asia and the Pacific. Already, 3.3 million people die every year due to the harmful effects of outdoor air pollution, with the PRC, India, Pakistan, and Bangladesh being the top four countries experiencing such deaths. In addition, heat-related deaths in the region among the elderly are expected to increase by about 52,000 cases by 2050 due to climate change, according to data from the World Health Organization. Deaths related to vector-borne diseases such as malaria and dengue may also increase.

A business-as-usual approach to climate change could also disrupt functioning ecosystem services, prompting mass migration — mostly to urban areas — that could make cities more crowded and overwhelm available social services.

Moreover, a warmer climate for the region could endanger energy supply. Climate change can exacerbate energy insecurity through continued reliance on unsustainable fossil fuels, reduced capacities of thermal power plants due to a scarcity of cooling water, and intermittent performance of hydropower plants as a result of uncertain water discharges, among other factors. Energy insecurity could lead to conflicts as countries compete for limited energy supply.

SOUTH AMERICA

65. Brazil Projects Rapid Growth in Wind and Solar by 2026

Brazil's latest 10-year energy expansion plan sees wind power doubling to a 13 percent share of the electricity matrix, while solar power stands to also gain a foothold.

The country's Mines and Energy Ministry unveiled July 10 its 10-year energy expansion plan, one that includes both electricity and combustion-fuel energy generation through 2026. Increased wind and solar power capacity would offset decreased hydropower capacity by the end of 2026, according to the plan. But, wind and solar associations have even more optimistic projects for sector growth through 2026.

Rodrigo Lopes Sauaia, executive director of the Brazilian Photovoltaic Solar Energy Association (Absolar) said that the government's latest 10-year energy expansion plan's projections for solar power growth "are conservative." Absolar projects that if the government follows Absolar's investment recommendations, large-scale solar power could have an installed capacity of 14,000 megawatts by 2026, compared to 9,660 megawatts in the government's plan. Reaching this projection would require 70 billion reais (\$21.8 billion) worth of investments, compared to 50 billion reais (\$15.6 billion) in the government's plan, Lopes Sauaia said.

"Solar power is growing in Brazil in part because solar equipment prices are rapidly declining making solar power more competitive with other energy sources," Lopes Sauaia said. "That's is why we are even more optimistic about such growth potential than the government, now trying diversify the electricity matrix to include a greater share of power from non-hydro renewable sources, another reason for solar power's projected growth here."

Renewables could offset a decade-long decrease in hydropower installed capacity, which will drop from 69 percent of the electricity matrix in 2016 to 56 percent in 2026. Hydropower generation will drop because over 80 percent of its remaining potential is in the Amazon where impacts caused by dam reservoirs' flooding parts of rainforests, some of them protected, will make it increasingly hard to get licenses from environmental agencies.

Wind power—which in 2016 accounted for 6.7 percent (10,025 megawatts) of the electricity matrix—would account for 13 percent (28,470 megawatts) in 2026. The plan also said that large-scale (non-rooftop) solar power, which accounted for .01 percent (21 megawatts) of the electricity matrix in 2016 would account for 4.5 percent (9,660 megawatts) of the matrix in 2026.

GENERAL

66. Glencore Says Electric Car Boom Is Coming Faster Than Expected

Glencore PLC Chief Executive Officer Ivan Glasenberg said the rise of electric cars will significantly boost demand for minerals including copper and lithium in the coming decades. “The electric vehicle revolution is happening and its impact is likely to be felt faster than expected,” Glasenberg told investors at an industry conference in Barcelona May 16. Almost all carmakers are increasing investment in electric vehicles as governments adopt tighter emissions targets, he added.

Electric vehicles require more copper wiring than standard internal combustion engines. For example, the battery in an electric car contains about 38 kilograms of copper, 11 kilograms of cobalt and 11 kilograms of nickel, according to Glencore, a trading and mining company. Those materials, along with manganese, stand to benefit from more demand for electric cars, Glasenberg said.

Demand is growing for battery-powered vehicles. European sales of alternative-fuel models, which include fully electric cars and hybrid vehicles, jumped 36 percent in the first quarter to 235,438 vehicles, according to the European Automobile Manufacturers’ Association.

Volkswagen AG will triple spending on developing alternatives to combustion engines to 9 billion euros (\$9.8 billion) over the next five years. Daimler AG’s bill for the transformation stands at 10 billion euros.

67. Volvo Planning to Pull Plug on Gasoline Engines

Volvo Car Group said on July 5th it expects to soon start phasing out vehicles powered solely by fossil fuels, joining a parade of manufacturers in shifting toward electrics more quickly than most in the industry expected a few years back.

The automaker says it plans to offer only hybrid or full-electric motors on every new model launched in 2019 or later, including five electrics it expects in its lineup by 2021. Though the company will continue to produce full-combustion versions as it makes the small upgrades automakers introduce with each new model year, when a major revamp occurs (typically every seven years) it will no longer offer that option. That means that by about 2025 Volvo will make its last full-gasoline or diesel car—the first major manufacturer to make such a pledge.

“This announcement marks the end of the solely combustion engine-powered car,” said Volvo Chief Executive Officer Hakan Samuelsson. “Volvo’s brand will be strengthened by electrification.”

Though electric cars have been around since the 1800s and have gotten a lot of attention in the past half-decade or so, they’re still just a fraction of the overall market as drivers balk at high prices and limited driving ranges. Battery-powered autos made up about 1 percent of sales in the U.S., Europe and China last year.

And even those tepid sales figures are largely driven by government prodding. China, in an aggressive push to fight smog, plans to impose quotas for battery-powered cars that will effectively force manufacturers to sell electrics. In Europe, where regulators have relied on diesel to reduce pollution, stricter rules that take effect in 2020 will cut limits on carbon dioxide emissions by a third—a threshold that will be difficult to meet without fully or partly electric engines.

In the U.S., though President Donald Trump has promised to scrap rules that would require automakers to almost double gas mileage, California is leading a push for even stricter standards. Its regulations will require about 15 percent of cars and trucks sold in 2025 to be zero-emission—meaning they'll almost certainly run on electricity. At least nine other states have embraced California's lead.

Consumer resistance is starting to ease as tighter regulation forces carmakers to lower costs, improve batteries, and come up with better designs. Goldman Sachs Group Inc. estimates about a quarter of cars sold globally by 2025 will be hybrid or electric.

BMW says the electric iNext will replace the 7-Series as its flagship in 2021 and expects battery-powered cars to account for some 25 percent of its sales by 2025. Volkswagen, in an effort to overcome revelations that it cheated on emissions tests for millions of diesels, is accelerating its rollout of electrics. The Audi luxury brand will introduce its first all-electric model, an SUV, in 2018, followed by another two battery-powered vehicles by 2020. In 2019, VW's Porsche unit will introduce the all-electric Mission E. Then in 2020 the VW car brand will roll out the first of four electric cars it's planning.

Automakers understand that they must cut prices and improve driving range for consumers to really embrace the technology, and they're starting to deliver. GM late last year introduced the all-electric Chevrolet Bolt, with a range of 238 miles and a price tag of \$38,000. And Volvo CEO Samuelsson said vehicles must have a range of at least 350 kilometers before they'll gain broad acceptance, a target he says his cars will meet.

Volvo said its first electric vehicle will be a Chinese-made compact expected to hit the market in 2019. The model, to be sold globally, will be based on the basic design of the company's XC40 compact SUV.

68. Electric Car Market Goes Zero to 2 Million in Five Years

The number of electric vehicles on the road rocketed to 2 million in 2016 after being virtually nonexistent just five years ago, according to the International Energy Agency.

Registered plug-in and battery-powered vehicles on roads worldwide rose 60 percent from the year before, according to the Global EV Outlook 2017 report from the Paris-based IEA. Despite the rapid growth, electric vehicles still represent just 0.2 percent of total light-duty vehicles.

"China was by far the largest electric car market, accounting for more than 40 percent of the electric cars sold in the world and more than double the amount sold in the United States," the IEA wrote in the report published June 7. "It is undeniable that the current electric car market uptake is largely influenced by the policy environment."

A multigovernment program called the Electric Vehicle Initiative will set a goal for 30 percent market share for battery power cars, buses, trucks and vans by 2030, according to IEA. The 10 governments in the initiative include China, France, Germany, the U.K. and U.S.

Countries and cities are looking to electric vehicles to help tackle their air pollution problems.

In order to limit global warming to below 2 degrees Celsius (3.6 degrees Fahrenheit), the target set by the landmark Paris Agreement on climate change, the world will need 600 million electric vehicles by 2040, according to the IEA.

After struggling for consumer acceptance, Tesla Inc. has made electric vehicles cool and trendy, and is pushing into the mass market with the new Model 3 sedan.

Consumer interest and charging infrastructure, as well as declining demand for diesel cars in the wake of Volkswagen AG's emissions scandal, has spurred massive investments in plug-in cars. An electrical vehicle "cool factor" could spur sales to 450 million by 2035, according to BP Chief Economist Spencer Dale.

69. Potential Increased Electric Car Demand Has Broad Energy Implications

The world's biggest oil producers are starting to take electric vehicles seriously as a long-term threat. OPEC quintupled its forecast for sales of plug-in EVs, and oil producers from Exxon Mobil Corp. to BP Plc also revised up their outlooks in the past year, according to a July 14 study by Bloomberg New Energy Finance (BNEF). The London-based researcher expects those cars to reduce oil demand 8 million barrels by 2040, more than the current combined production of Iran and Iraq.

Growing popularity of EVs increases the risk that oil demand will stagnate in the decades ahead, raising questions about the more than \$700 billion a year that's flowing into fossil-fuel industries. While the oil producers' outlook isn't nearly as aggressive as BNEF's, the numbers indicate an acceleration in the number of EVs likely to be in the global fleet.

BNEF expects electric cars to outsell gasoline and diesel models by 2040, reflecting a rapid decline in the cost of lithium-ion battery units that store power for the vehicles. It expects 530 million plug-in cars on the road by 2040, a third of worldwide total number of cars.

The Organization of Petroleum Exporting Countries raised its 2040 EV fleet prediction to 266 million from the 46 million it anticipated a year ago. Battery cars under the new projection account for 12 percent of the market within 23 years, compared to 2 percent in the 2015 forecast. Based in Vienna, the group representing 14 nations expects half the number of diesel vehicles as it did a year ago.

Others making similar expectations according to the BNEF note include:

- The International Energy Agency more than doubled its central forecast for EVs, raising its 2030 EV fleet size estimate from to 58 million from 23 million,
- Exxon Mobil boosted its 2040 estimate to about 100 million from 65 million,
- BP anticipates 100 million EVs on the road by 2035, a 40 percent increase in its outlook compared with a year ago,
- Statoil ASA, the Norwegian state oil company, says EVs will account for a 30 percent of new sales by 2030.

Just a fraction of the world's cars sold today are powered by batteries instead of gasoline. Many analysts increasingly say the market will expand rapidly as almost all major auto makers bring dozens of new EV models to market. OPEC said in its oil market report on July 12 that electric vehicle sale targets could dampen demand in some parts of Asia as soon as 2018.

Long-term growth depends on a wide range of factors, including policy decisions by governments seeking to tackle air pollution to the cost of the lithium-ion batteries that account for about a third of the cost of each one.

Yet even as oil majors lift their outlook, they remain much less optimistic than the automakers. The world's top automakers have a combined plan to sell 6 million EVs a year by 2025, rising to 8 million in 2030, according to Bloomberg New Energy Finance.

Some big companies plan to go all electric. Volvo AB expects to have an electric motor in every car by 2019 (See story above.). It joins Elon Musk's Tesla Inc. as a major EV maker and Geely Automobile Holdings Ltd., the Hong Kong-based maker of London's black cabs, which is re-branding itself to focus on EVs.

70. Ship Efficiency Targets Met 'Ten Years in Advance'

The global shipping fuel efficiency goal for 2025 was already exceeded by a significant share of vessels last year, according to a study released as UN talks on greening the sector kicked off in London. In 2016, 55% of newly-built general cargo ships surpassed the target agreed by the International Maritime Organization (IMO) to force the sector to become 30% more fuel-efficient by 2025, the report by consultancy CE Delft showed.

Container ships came close to matching that share with 52% of vessels exceeding the target, while only 14% of bulk carriers did so. However, average fuel efficiency of all ships actually decreased between 2015 and 2016, the consultants found.

The 2025 fuel efficiency goal is part of the Energy Efficiency Design Index scheme, adopted by the IMO in 2011, which also sets targets for 2015 and 2020. The targets and the timetable are part of the discussion at this week's meeting of IMO's marine environmental protection committee (MEPC).

A proposal by the US to bring the 30% goal forward from 2025 to 2022 and to consider adding a further target was cleared for formal debate at last October's MEPC meeting.

Countries as well as industry and NGO representatives will share their views on the proposal in writing in the months leading up to next year's meeting where it could be adopted. However, Japan, which is chairing the correspondence, has proposed to push the final decision on the timetable until 2019, according to sources.

Aside from fuel efficiency, this week's talks cover the IMO greenhouse gas strategy agreed last October, the roll-out of a global sulfur cap and proposals for low-emission zones in European seas.

71. IEA: Truck Efficiency Key to Curbing Oil Demand

The International Energy Agency (IEA) has urged policymakers worldwide to legislate for cleaner trucks, flagging the EU as one of the main markets driving up oil demand. The expected growth of road freight transport is set to push the sector's CO2 emissions up by a third by 2050, but this could be countered with a renewed policy focus on environmental standards, the agency said in a new report.

The IEA singled out the EU, together with the US and China, as the main culprit for the rising oil demand by trucks. The bloc operated the world's largest fleet in 2015 with 28 million trucks but has yet to create CO2 standards for the vehicle class, it noted.

The report proposed creating fuel economy standards in each of the world's regions. These should be coupled with favorable taxation for low-carbon trucks and incentives for infrastructure for cleaner fuels such as electricity, biofuels and hydrogen, it added.

Such measures could help cut the road freight sector's oil demand by 16 million barrels a day by 2050 compared to business as usual, the IEA said. As a result, trucks' direct CO₂ emissions and energy intensity could drop by 75% and 34%, respectively, it estimated.

"For far too long there has been a lack of policy focus on truck fuel efficiency," said IEA executive director Fatih Birol.

The European Commission is not expected to table its long-awaited proposal for CO₂ standards for trucks before next spring, as it plans to base these on reference values from a new certification scheme known as VECTO. (See story above.) Trucks already have to comply with air pollutant limits under the Euro VI standard.

72. ICCT Issues Light-Duty Vehicle GHG and Fuel Economy Standards Update

Global greenhouse gas (GHG) emission and fuel economy standards for light-duty vehicles (LDVs) have progressed significantly in a little more than a decade. Ten years ago, only four governments had introduced mandatory GHG emission/fuel economy standards: China, Japan, South Korea, and the United States. The European Union and Canada had announced their intention to introduce GHG emission standards, but neither government had a legislative framework in place. Today, 10 governments—Brazil, Canada, China, the European Union, India, Japan, Mexico, Saudi Arabia, South Korea, and the United States—have established fuel economy or GHG emission standards for LDVs. And all are among the top 15 vehicle markets worldwide: nearly 80% of new LDVs sold globally are currently subject to some kind of GHG emission or fuel economy standards. Other large markets, such as Australia, Thailand, and Vietnam, are in the process of developing standards as well.

This report is an update to a 2007 publication reviewing global standards. ICCT examined how the GHG and fuel economy standards have changed over time, how the auto industry has reacted in different regions, and discussed how the standards may continue to evolve in the future. It compared characteristics of vehicle fleets in major markets and estimated the policy impacts of fuel economy standards on transport GHG emission levels around the world.

To summarize the state of GHG/fuel economy standards worldwide in 2017:

- Fuel economy regulations in most regions give manufacturers substantial flexibility in meeting their targets.
- Fuel economy standards for LCVs are evolving along with standards for passenger cars.
- The increasing gap between real-world and official fuel economy/CO₂ emission value is a growing concern because it compromises the actual benefit of standards and undermines their legitimacy.
- A number of regions are adopting complementary policies to improve vehicle fleet fuel economy.
- Compared to business as usual, the standards that have already been adopted will significantly reduce GHG emissions. However, to offset the impact of a growing number of vehicles and increases in total vehicle kilometers traveled over the long term, regulation must spread beyond the 10 regions discussed in this report.

In general, the increasing willingness of governments to adopt and strengthen vehicle GHG emission and fuel economy standards reflects their growing understanding that reducing GHG emissions and fuel consumption is crucial to improving environmental health (including meeting global climate change commitments), ensuring energy security, shielding consumers from fluctuating oil prices, and driving technological innovation.

73. IMO Member States Urged To Back Action on Heavy Fuel Oil Risks

As the International Maritime Organization's (IMO) Marine Environmental Protection Committee (MEPC 71) opened its meeting recently in London, the Clean Arctic Alliance called on IMO member states to support a Canadian proposal to mitigate the risks posed by the use of heavy fuel oil (HFO) in Arctic waters³.

Canada, backed by Finland, Germany, Iceland, the Netherlands, Norway and the US, has submitted a proposal to MEPC, calling for work to begin on mitigating the risks of use and carriage of heavy fuel oil (HFO) as fuel by ships in the Arctic⁴.

"With climate change already having enormous impacts on the Arctic region, the Clean Arctic Alliance is calling on IMO members states to support Canada's proposal, and commence work immediately to reduce the risks posed by the use of heavy fuel oil by shipping in Arctic waters", said Sian Prior, Lead Advisor to the Clean Arctic Alliance, a coalition of international non-governmental organizations working for an Arctic phase-out of HFO. "IMO members must also commit to complying with any subsequent measures taken to reduce risks from HFO, including a ban on its use in the Arctic".

Heavy fuel oil is a dirty and polluting fossil fuel that powers ships throughout the world. Around 75% of marine fuel currently carried in the Arctic is HFO; over half by vessels flagged to non-Arctic states – countries that have little if any connection to the Arctic.

But as sea ice melts and opens up Arctic waters further, even larger non-Arctic state flagged vessels fueled by HFO are likely to divert to Arctic waters in search of shorter journey times. Combined with an increase in Arctic state flagged vessels targeting previously non-accessible resources, this will greatly increase the risks of an HFO spill.

Already banned in Antarctic waters, if HFO is spilled in the colder waters of the Arctic, it breaks down slowly, with long-term devastating effects on both livelihoods and ecosystems. HFO is also a higher source of harmful emissions of air pollutants, such as sulfur oxide, nitrogen oxide and particulate matter, including black carbon, than alternative fuels such as distillate and liquid natural gas (LNG). When emitted and deposited on Arctic snow or ice, the climate warming effect of black carbon is five times more than when emitted at lower latitudes, such as in the tropics.

A number of shipping organizations, including expedition tour operator Hurtigruten and the Danish Shipowner's Association (Danske Rederier) have already called for a ban on heavy fuel oil from

³ MEPC 71 took place at the International Maritime Organization, London, From July 3-7, 2017. <http://www.imo.org/en/MediaCentre/MeetingSummaries/Pages/Default.aspx>

⁴ The Canadian proposal, MEPC 71/14/4 Measures to reduce risks of use and carriage of heavy fuel oil as fuel by ships in Arctic waters, will be discussed during MEPC. Provided there is consensus the proposal will be accepted and added to the work program of MEPC which lists "outputs"

the Arctic. On June 29, ahead of MEPC71, IMO the Norwegian Shipowners Association also announced that it also supports a ban on HFO use in the Arctic.

“New IMO measures, including a cap on the sulfur content of ships’ fuel, mean that ship owners are currently considering technologies to allow the ships to continue operating on HFO beyond 2020, it’s vital that the IMO’s work to agree measures on HFO risk mitigation in the Arctic be carried out immediately, so that the highest standards for shipping can be adopted and implemented in this especially vulnerable region”, concluded Prior. “It would be ridiculous to delay action until Arctic shipping operators have installed technology in the form of scrubbers, which will allow the continued use of HFO beyond 2020, only to then decide to ban HFO because of the spill risk.”⁵

74. China, EU Bolster Greening of Global Shipping to Curb Emissions

The trillion-dollar global shipping industry may soon be forced to curb greenhouse gas emissions under new rules backed by the European Union and China.

Over 200 representatives convened this week at the International Maritime Organization, the United Nations shipping supervisor based in London, to discuss regulation that could turn their industry, currently responsible for as much as 3 percent of the world’s emissions, into a zero-carbon operation by the second half of the century.

The shift toward clean power was prompted by the Paris climate agreement, as well as the threat of regional rules being considered by the EU and tested in China. Europe has proposed a plan to add ship emissions to its trading scheme by 2023 if the IMO talks don’t succeed. China is piloting a similar program that includes Shanghai’s ports and shipping industry.

The EU proposal “sets a deadline for the IMO to introduce a target and measures,” said Sotiris Raptis, senior adviser to the European Sea Ports Organization and former EU parliamentary adviser. “But it’s a global industry, it’s difficult to regulate emissions generated outside of jurisdiction.”

Imposing emissions would close a loophole left by the 2015 Paris climate agreement. Ship engines almost always burn heavy fuel oil, one of the dirtiest and cheapest forms of energy. IMO members will return to discuss their strategy and level of ambition in October. An agreement could be drafted by next year and implemented in 2023.

“We’re seeing that delegates are willing to discuss matters,” said Edmund Hughes, head of air pollution and energy efficiency at the IMO.

The loudest voices at the talks are small Pacific states such as the Marshall and Solomon Islands and Kiribati, which are among the most vulnerable to rising seas from climate change. Some

⁵ It was agreed at MEPC 70 in October 2016, to maintain the 2020 deadline for reducing the cap on the sulfur content of fuel oil to 0.5%. The Clean Arctic Alliance warns that the technology to achieve the maximum permitted sulfur content in emissions will result in scrubbers being installed, would mean that HFO can still be used. Once ship owners have installed scrubbers, they are unlikely to be supportive of a ban on HFO as scrubbers won’t be required when using low sulfur distillate fuels. It is not known what measures will be agreed to reduce emissions of black carbon; but it is important that the measures agreed to address one problem don’t conflict with the resolution of another. A ban of HFO will solve all these problems – by reducing sulfur content and reducing black carbon and reducing the impact of an oil spill.

islands could be submerged by water as soon as the next decade, prompting them to form a coalition with some EU countries to seek strict IMO emission rules.

“The sector needs to urgently step up its efforts,” said Mike Halferty, transport minister of the Marshall Islands, which has the most ships registered under its flag. “If international shipping was a country, it would have the seventh-largest emissions in the world.”

China and India, the world’s two most populous nations, submitted a joint document supporting a switch to lower-carbon shipping. Under their plan, countries would be free to create individualized emission reduction plans.

Oil-producing countries such as Saudi Arabia and the United Arab Emirates emphasized that a compromise would be necessary, according to statements on July 15 that signaled unwillingness to readily agree on proposed measures. Delegates from South American nations including Argentina and Chile said the cost impacts of long-haul trade from geographically-remote ports need to be considered.

“A lot of the countries are disagreeing on the level of ambition and targets, but they’re all saying that we need to get our act together and have major investment into research and development of alternative fuels,” said Ed King, international shipping lead at the Global Strategic Communications Council, a public affairs firm with a focus on climate and energy. “That may be one of the key planks that comes out of this initial strategy.”

Member states are beginning to agree to switch to cleaner fuels, according to Tristan Smith, a lecturer at University College London’s energy institute and former naval architect.

“What we’re seeing for the first time at these talks is a collective focus on alternative fuels,” Smith said. “Previously, member states typically backed efficiency measures. Technology is not the problem, it’s been a political-will problem.”

Norway and Finland are among the leaders in the transition, and have begun to operate ferries with batteries. Lithium-ion pack maker Leclanche SA recently got its 4.3-megawatt maritime battery approved by DNV GL, clearing the way for the market to grow. Royal Dutch Shell Plc is making a big bet on hydrogen to power ships. Emissions-free nuclear propulsion has long been used by warships and ice breakers and the IMO has studied atomic power for cargo vessels.

With global trade expected to nearly double by 2030, according to a study by PricewaterhouseCoopers LLP, the task to rein in emissions from shipping—which carries about 90 percent of the world’s goods—will become more important. If left unchecked, the industry could account for 17 percent of the world’s carbon emissions by 2050, according to research from the European Parliament.

That in turn would make achieving Paris accord’s goal to keep global warming well below 2 degrees Celsius (3.6 degrees Fahrenheit) even more elusive.

75. Countries Outline Global Plan on Shipping Emissions

The International Maritime Organization (IMO) has agreed a draft outline of a strategy to tackle emissions from shipping but shied away from a long-term target. The draft adopted at the week-long talks only sets out the topics that will be addressed in the strategy, which countries agreed

to deliver by 2018. Concrete measures to reduce emissions will only be agreed in 2023 in line with an agreement reached last October.

A proposal by the Bahamas to set a greenhouse gas target for the sector after 2050 was backed in informal talks by most EU states attending the meeting of IMO's marine environmental protection committee (MEPC) in London, according to a source present at the meeting. Major industry bodies also intervened to back the move, but countries including Brazil rejected it as premature.

The long-term goal will be debated at two meetings scheduled before the next MEPC session in April 2018, the source added.

Delegates also agreed

- to launch a discussion to revise the IMO's Energy Efficiency Design Index for ships. A compromise was reached to decide next year whether the scheme's 30% fuel efficiency target should be brought forward from 2025 to 2022 as proposed by the US.
- adopted amendments to give certain ships more time to comply with the IMO's convention against the spread of invasive species through ship ballast water, set to come into force this September.
- endorsed a document setting out potential issues with the implementation and enforcement of the global 0.5% sulfur cap for marine fuels agreed last year.
- adopted a declaration by the Baltic and North Sea countries to establish the EU's first two nitrogen oxide (NOx) emission control areas. New limits on ships' NOx emissions will come into force in January 2021.

76. Daily Emissions of Cruise Ships Same as One Million Cars

Cruise ships can emit as much particulate matter as a million cars every day and the air quality on deck can be as bad as the world's most polluted cities, according to a new investigation. An undercover investigation by the United Kingdom's Channel 4 television station has revealed the shocking levels of pollution found on board some cruise ships.

Channel 4's Dispatches program sent its investigators onto P&O Cruises' 250-metre-long Oceana vessel, which can carry more than 2,000 passengers. The program focused on monitoring ultra-fine particles in the air around the vessel and the investigation showed that just one ship can emit the same amount of particulate matter in one day as one million cars.

Dispatches found that the air on the upper deck of the Oceana, downwind from the boat's funnels, had 84,000 ultra-fine particulates per cubic centimeter. The numbers topped 226,000 directly next to the funnels. The same program monitored the air quality in London's busy Piccadilly Circus, using the same recording devices, and found that the numbers were just 38,400 per cubic centimeter.

One doctor told the program that "these are the levels you would expect to see in the most polluted cities in the world like Shanghai, Delhi and so on". He added that short term exposure could cause increasing respiratory symptoms and that crew members working long-term on board could experience side effects "we are just starting to understand".

Cruise ships typically use heavy fuel oil in their engines, a residual product that is left over after petrol and diesel have been produced. It has very high sulfur content but is more cost-effective than other fuels.

P&O responded to the program's findings by highlighting that it has reduced its fuel consumption by 28% since 2005 and that the company slashed CO2 emissions by 20% in 2014 alone. The company also revealed that the Oceana will soon be fitted with "exhaust gas cleaning systems" in an effort to reduce emissions further. Its statement added that: "we recognize that there is a public interest... related to particulate matter and related health issues".

But a study by CE Delft recently warned that the efficiency of new ships declined in 2016 compared with 2015.

It is estimated that 25.3 million passengers worldwide will travel on cruise ships in 2017, up from just 15.8 million a decade ago, according to data from the Cruise Lines International Association.

Popular Croatian tourist destination Dubrovnik, known around the world for being the filming location of Game of Thrones, is struggling to cope with the vast numbers of visitors being brought to its medieval walls by cruise ships. The statistics do not look good for this summer either. In 2016, 529 of the vessels stopped off in Dubrovnik, bringing 799,916 passengers. That is an increase from 475 ships in 2015 and 463 in 2014.

Shipping currently accounts for 2-3% of global greenhouse gas emissions but a 2014 UN study warned increasing trade could up the sector's carbon footprint by as much as 250% by mid-century. If shipping were an actual country then it would be the globe's seventh biggest emitter.

Last week, 170 countries met at the United Nations' International Maritime Organization meeting in London. They agreed a seven-step outline that is aimed at decarbonizing the shipping sector and an interim plan is now penciled in for next year, with a comprehensive plan due in 2023.

Although one proposal called for the sector to come up with climate targets in line with the Paris Agreement and to decarbonize by 2050, a consensus could not be found. Further talks will be held in October. (See story above.)

77. Carbon Prices Jump as Lawmakers Plan Tightening

Carbon prices from California to New Zealand are soaring as lawmakers across the globe seek more stringent rules for their greenhouse-gas markets. California emission permits surged to a four-year high after Gov. Jerry Brown published a plan to extend the biggest U.S. carbon trading program. In Europe, allowances reached their highest level since March as politicians debate proposals to cut a permit glut, while New Zealand carbon contracts rose before a review of its system.

Most countries are looking for the most cost-effective way to switch from the fossil fuels blamed for climate change. Even in the U.S., President Donald Trump's decision last month to pull out of the landmark Paris accord on cutting emissions triggered widespread condemnation by civic and state leaders across the country including from the governors of New York and Massachusetts.

China is planning to install the world's largest carbon market this year, though it's seen phasing in industries over time to smooth the impact on the economy. The biggest energy consumer

burned the least coal in six years in 2016, became the number one producer of renewable energy and even lowered its emissions of climate-warming gases, BP Plc data show.

“There seems to be a clearer political will to lift carbon prices,” said Ingo Ramming, the London-based co-head of commodity solutions for Commerzbank AG. “Even if China’s national carbon market takes longer to install than expected, globally there’s a lot happening, especially among the North American states and provinces.”

In carbon trading, governments set a limit on emissions and then auction off or give away rights to pollute within the cap. These permits can be sold by more efficient companies to those that are less efficient. As governments periodically lower the caps, overall emissions fall.

California’s proposed legislation is designed to extend the basic current structure of its cap-and-trade program through 2030. Brown emphasized that his plan would not only help limit global warming, but “protect vulnerable communities from industrial poisons.” On July 13, he urged lawmakers to extend the program to show the world how to lower the risks of mass migration, fires and disease. “This isn’t for me. I’m going to be dead. It’s for you. And it’s damned real. So I just ask you; take it seriously.”

California’s December allowances closed at a peak of \$15.41 a metric ton recently, the highest since January 2013 when the program started, according to data from exchange ICE Futures.

“They’ve never been this high, except for the very beginning of the market,” said Lenny Hochschild, managing director at Evolution Markets Inc., the environmental broker based in White Plains, N.Y.

In Europe, lawmakers are currently debating proposals to control the supply of emission allowances as a way to boost prices in its 12-year-old carbon market. Per Lekander, a fund manager at Lansdowne Partners U.K. LLP in London, reckons permit values will double within a year if the plans are approved.

European Union efforts to reform its \$48 billion cap-and-trade system have repeatedly failed to increase the penalty for polluting, with the price of emissions slumping more than 80 percent since 2008 because of the glut.

The latest steps to overhaul the market looked “promising” after legislators met July 10, said Siim Kiisler, the environment minister of Estonia, current holder of the European Union’s rotating presidency. Lawmakers meet again on the market changes in September.

The Group of 20 nations published its first-ever climate and energy action plan recently. The U.S. was the only member that didn’t agree that the Paris accord was “irreversible.”