

# Carmakers rev up emissions cuts as tough rules loom

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Every gram of CO<sub>2</sub> counts as carmakers race to cut emissions before tough new rules kick in

Global carmakers, stung by emissions scandals, are racing to hunt down every gram of harmful CO<sub>2</sub> spewed out on the roads as tougher pollution rules kick in.

Auto manufacturers gearing up for Europe's biggest annual car show in

Geneva are celebrating the end of the sector's crisis. European sales have returned to levels last seen in 2008 before a global financial meltdown inflicted deep dents on their business.

But a dark cloud has gathered over the outlook because of emissions scandals, especially involving European market leader Volkswagen, and the road to recovery will be paved with unprecedented efforts to fight auto pollution, involving equally unprecedented costs.

## **Accelerating costs**

"Solutions are more and more expensive," said Marc Charlet, at Mov'eo, an automotive and mobility research network. "There is much at stake here, and the competition is fierce."

European rules for combustion engines were always going to become more stringent, but Volkswagen's emissions cheating, the industry's biggest pollution scandal to date, has turbo-charged regulators' eagerness to crack down on pollution.

Sales of cars with cleaner alternative technologies are still only marginal, with electric cars accounting for just 1.2 percent of new car sales in the EU in 2015, according to the European Environmental Agency.



The Volkswagen emissions scandal has made regulators more determined to enforce pollution rules

Volkswagen admitted in 2015 to having installed software in 11 million diesel engines worldwide to circumvent emissions tests.

Carmakers are now having to steer toward engines that emit no more than 95 grams of CO<sub>2</sub> per kilometre by 2021 to meet European requirements, compared to 130 grams in 2015.

But as [diesel cars](#) have been getting a bad rap because of emissions scandals, that target looks harder to meet.

"Diesel cars emit 15 percent less CO<sub>2</sub> per kilometre" than gasoline-fuelled models, said Christophe Aufrere, a technology strategist at car parts maker Faurecia.

That means gasoline-powered cars have to take up the slack, requiring the industry to squeeze more efficiency out of engines and to reduce vehicles' weight.

## **Every gram counts**

If they don't manage, the bill will be high.



Cars will become more expensive to build as research and development costs spiral

Automakers failing to meet the CO<sub>2</sub> targets—capping petrol consumption to 4.1 litres per 100 kilometres and diesel to 3.6 litres—will have to pay 95 euros (\$100) for every extra CO<sub>2</sub> gram emitted by each

car—potentially adding up to tens of millions of euros of fines.

"We will have to look for grams to save in every part of the car, particularly in components," said Guillaume Devauchelle, head of innovation and research and parts maker Valeo.

This includes air conditioning, second only to the engine for energy use, electric compressors, self starters, right down to lightbulbs. Every weight gain of 12 kilos, meanwhile, translates into one gram of CO<sub>2</sub> saved.

Better electronics and aerodynamic designs will also help.

Research and development costs "have practically doubled in the past decade" said Remi Cornubert at AT Kearney, a consulting firm, adding that half the increase was forced on carmakers by regulators.

"The car of the future will be significantly more expensive to design and to build," said Guillaume Crunelle, auto expert at the Deloitte consulting group.



There's always the glamour as car makers showcase the stuff of dreams like Renault's new Alpine model

### **There's always the glitz**

Executives needing a break from nagging worries about rules and money can always take time to enjoy the glamour for which the Geneva show is famous.

The legendary Ferrari, Lamborghini, Pagani, McLaren and Bentley have picked Lake Geneva's shore to present new models. Renault will showcase the final version of its Alpine A110 sports car.

"Geneva has always been the show of beautiful automobiles and prestigious racing cars," said Ferdinand Dudenhoeffer at the CAR institute.

But the greatest buzz may come from so-called "crossover" vehicles (CUVs), which combine features taken from sports utility vehicles (SUVs) with those of passenger cars.

The segment, including fashionable urban four-wheel drive vehicles, now makes up nearly 30 percent of the European car market and features the Volvo XC60, the Citroen C-Aircross, the DS7 Crossback and the Land Rover Velar.

Some 180 companies will be present at the 10-day show which opens to the public on March 9 after two press days during which most major corporate announcements are expected. Last year's show attracted 687,000 visitors.

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