

California regulators there have proposed rules that would require all cars, even those that drive themselves, to be equipped with a brake pedal and a steering wheel. Also in the proposal: an outright ban on cars travelling with no human driver aboard.



California has more autonomous cars on its road than any other state—and perhaps more than any other jurisdiction in the world. Under the proposal by the state's Department of Motor Vehicles, all autonomous cars operating on California's public roads would need a steering wheel and brake pedal, and at those controls would need to be a licenced driver with an autonomous-vehicle operator certificate, capable of taking control if something goes wrong. The rules would also require carmakers to disclose to vehicle operators if and what information is collected, beyond that information needed for safe operation of the vehicle, and to obtain permission to access that extra information. Vehicles would also have to be equipped to detect and deflect cyber-attacks and other types of unauthorised access.

Google, a leader in autonomous-car development, have reacted negatively to the proposal, saying "Safety is our highest priority and primary motivator as we do this...we're gravely disappointed that California is already writing a ceiling on the potential for fully self-driving cars to help all of us who live here."

But California DMV Director Jean Shiomoto, in a [prepared statement](#), said the growing deployment of autonomous vehicles raises "complex questions related to vehicle safety, certification, operator responsibilities, licensing and registration, privacy, and cyber-security", and said the proposed rules are aimed at protecting "the safety of autonomous vehicles and the safety of the public who will share the road with these vehicles." The rules are not final or imminent; Shiomoto said "We want to get public input on these draft regulations before we initiate the formal regulatory rulemaking process." Moreover, because the state is looking to write the rules in the form of regulations rather than laws, whatever changes might be warranted by the advancing state of the art could be made with relative ease.

The rules, if finalised, might prompt technology companies such as Google and automakers such as Daimler and Tesla to look beyond California for their first deployment of self-driving cars. This summer, Google started testing its self-driving cars in Austin, Texas. It might be a run-but-can't-hide situation, though; California has a long history of being at the forefront of automotive regulations which are subsequently adopted throughout the United States and

beyond.

The proposal stems from a law, passed in 2012 by California legislators, ordering the state's Department of Motor Vehicles to issue rules for the testing and use of autonomous vehicles. The DMV already has completed testing rules that require experimental vehicles to be operated by trained test drivers and to have a steering wheel when operated on public roads.

Self-drive car makers worry the proposal would effectively stop commercial deployment of driverless cars, which could function as robotic taxicabs that pick up and drop off passengers. It could also hamper the deployment of find-and-fetch systems being developed by established car companies to allow personal cars to drive themselves to and from faraway parking spaces at their owner's smartphone command.

The DMV has scheduled two public hearings for early next year for testimony on the proposed regulations. It has also asked PATH (California's Partners for Advanced Transportation Technology), a research program of the University of California at Berkeley, to conduct a review of the "behavioural competencies necessary to safely operate autonomous vehicles." The stated goal of that review is to involve industry experts, researchers, and other stakeholder organisations in deep technical discussions of the regulations. Full text of the proposed regulations is [available online](#) .