

NEVADA LEGISLATIVE COUNSEL BUREAU

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RESEARCH BRIEF ON

AUTONOMOUS VEHICLES

Car manufacturers and technology companies are pushing for technological advancements for autonomous vehicles that potential revolutionize to transportation. The possibilities for private, and commercial transportation appear to be endless. Autonomous vehicles could have applications for ride-sharing schemes and potentially lead to fully connected communities that reduce traffic jams, human error related crashes, and the need for parking spaces.

However, it remains to be seen how autonomous vehicles will interact with the current infrastructure and traditional traffic participants. Further, there are still questions to be answered on how autonomous vehicle manufacturers deal with privacy concerns and how vulnerable to cyberattacks autonomous vehicles are.

It might still be some time until fully autonomous vehicles are the norm on our roadways. Nevertheless, cities, states, and the federal government have to continue to review issues surrounding autonomous vehicles. They have to ensure there are sufficient laws and regulations that both foster this nascent technology and safeguard everyone's safety.

NEVADA

In 2011, Nevada was the first state to authorize the operation of autonomous vehicles. That year, the Nevada Legislature passed <u>Assembly Bill 511</u>, which requires

Nevada's Department of Motor Vehicles (DMV) to adopt regulations to authorize the operation of autonomous vehicles on highways within Nevada and to establish a driver's license endorsement for the operation of such vehicles.

order to further encourage autonomous vehicle industry to come to Nevada, while at the same time ensuring a sufficient level of safety, the Nevada Legislature passed Assembly Bill 69 during the 2017 Legislative Session. The bill authorizes a fully autonomous vehicle to be tested or operated on a highway within Nevada if certain requirements related to safety are met. Under the bill, the fully autonomous vehicle must be capable of detecting a failure or malfunction of the autonomous driving system and responding to such a situation by getting the vehicle to safely stop or otherwise achieve a reasonable safe state. Assembly Bill 69 also authorizes the testing and use driver-assistive platooning technology within the State. This technology enables two or more vehicles to travel on a highway at electronically coordinated speeds in a unified manner and follow each other at a distance that is closer than would be reasonable and prudent without the use of the technology.

In addition, A.B. 69 requires a person responsible for testing autonomous vehicles to report certain crashes to the DMV. It prohibits a local government from imposing a tax, fee, or other requirement on any autonomous driving system or autonomous vehicle. And, the bill extends immunity from liability for damages caused by modifications by an unauthorized third party to the original manufacturer or developer of an autonomous driving system.

Lastly, A.B. 69 provides for the permitting by the Nevada Transportation Authority (NTA) of "autonomous vehicle network companies" and addresses their regulation, insurance, and taxation in a manner generally consistent with transportation network companies such as Uber or Lyft. The bill also requires the NTA and the Taxicab Authority to authorize a common motor carrier, contract motor carrier, or certificate holder to use one or more fully autonomous vehicles in certain circumstances.

OTHER STATES

Since 2012, at least 41 states and the District of Columbia have considered some form of legislation related to autonomous vehicles. Currently, 21 states and Washington, D.C. have passed legislation related to autonomous vehicles.

Additionally, governors in five states have issued executive orders addressing autonomous vehicles. The graphic below offers an overview of states that have either enacted legislation or executive orders on autonomous vehicles.



Source: National Conference of State Legislatures, 2017.

The different legislative measures and executive orders vary widely in their scope and applicability. Some states only have commissioned studies on this new technology, while other states have authorized the testing and operating of different levels of autonomous vehicles.

California, for example, passed a variety of legislative measures that affect the testing and operating of autonomous vehicles in the state. In 2017 alone, the California State Legislature passed three bills repealing requirements that restrict the application process and extend the testing opportunities. One of the bills also authorizes the Livermore Amador Valley Transit Authority to conduct a testing project with fully autonomous vehicles. Utah, on the other hand, only has authorized its Department of Transportation to execute a testing program and a study related to autonomous vehicles that reviews federal guidelines.

executive orders mainly created The committees that are tasked with coordinating different agencies' efforts to study autonomous vehicles and assist with issues surrounding the testing and operating of autonomous vehicles. For example, Arizona's governor signed an executive that established order in 2015 "Self-Driving Vehicle Oversight Committee." Similarly, Wisconsin's governor signed an executive order in 2017 that created the "Steering Committee on Autonomous and Connected Vehicle Testing and Deployment."

FEDERAL GUIDELINES

The National Highway and Transportation Safety Administration (NHTSA) issued guidelines in 2016 and 2017 for autonomous vehicle technology. The latest set of federal guidelines, *Automated Driving Systems 2.0:* A Vision for Safety, offers technical assistance to states and entails voluntary guidelines that focus on normed levels of automation. As such, the guidelines include best practices for highway safety officials and state legislatures.

In September 2017, the United States House of Representatives passed <u>H.R. 3388</u>—the Safely Ensuring Lives Future Development

and Research in Vehicle Evolution (SELF DRIVE) Act. At the same time, the United States Senate introduced S. 1885—the American Vision for Safer Transportation through Advancement of Revolutionary Technologies (AV START) Act. These bills contain provisions preempting states from regulating autonomous vehicles to a certain degree. The bills also would create a highly automated vehicle technical committee and start the process to update the federal vehicle safety standards.

OTHER SOURCES

- "<u>Autonomous Vehicles in California</u>," California's Department of Motor Vehicles, 2017.
- "<u>How an Automated Car Platoon</u> <u>Works</u>," Volpe Center, U.S. Department of Transportation, July 2017.
- <u>Autonomous Vehicles Meet Human</u> <u>Drivers: Traffic Safety Issues for States</u>, Governors Highway Safety Association, February 2017.
- <u>Autonomous Vehicles Legislative</u> <u>Database</u>, National Conference of State Legislatures, 2017.