

Date of Hearing: July 1, 2019

ASSEMBLY COMMITTEE ON TRANSPORTATION
Jim Frazier, Chair
SB 59 (Allen) – As Amended May 17, 2019

SENATE VOTE: 37-1

SUBJECT: Autonomous vehicle technology: Statewide policy

SUMMARY: Codifies an existing interagency working group lead by the Office of Planning and Research (OPR) to guide policy development for autonomous passenger vehicles, as specified. Specifically, **this bill:**

- 1) Codifies an existing interagency working group lead by OPR to guide policy development for autonomous passenger vehicles.
- 2) States the following entities shall participate in the interagency working group:
 - a) The California Transportation Agency (CalSTA);
 - b) The California Department of Transportation (CalTrans);
 - c) The California Department of Motor Vehicles (DMV);
 - d) The Governor’s Office of Business and Economic Development (GoBiz);
 - e) The Strategic Growth Council;
 - f) The State Air Resources Board (ARB);
 - g) Representatives of local government as determined by OPR; and
 - h) Any other organizations OPR invites, including the creation of advisory groups.
- 3) Requires the working group to submit recommendations to the Legislature and do all of the following, based on specified principles:
 - a) Examine specific policy options, including both mandates and incentives, and identify actions that require further statutory authority;
 - b) Identify additional research and data needs;
 - c) Provide an opportunity for input; and
 - d) Consider other agency processes or programs that are ongoing and data points that are being collected.
- 4) Establishes the following principles to guide the workgroup in their recommendations:
 - a) Reduce motor vehicle crashes and improve road safety for all users;

- b) Maximize ridesharing and shared use of autonomous passenger vehicles by encouraging pooling and prioritizing pooled vehicles' mobility;
 - c) Shift the use of autonomous passenger vehicles to zero-emission technology as quickly as is feasible;
 - d) Deploy autonomous passenger vehicles in ways that reduce overall emissions from all vehicles on the road consistent with the states climate and energy goals;
 - e) Integrate autonomous passenger vehicles as part of, and complementary to, a multimodal transportation system, including public transit, walking, and biking, that moves people and goods to destinations quickly and efficiently and that is, taken as a whole, more energy efficient, space efficient, environmentally benign, and beneficial to human health;
 - f) Support compact infill development rather than accelerating sprawl, recognizing there are many factors that contribute to sprawl, and further the implementation of robust policies that support the state's planning priorities;
 - g) Increase the availability of affordable mobility options, particularly for low-income and disadvantaged communities, and increase accessibility for individuals with physical and cognitive impairments; and
 - h) Promote the transportation needs of rural residents and communities in a manner that improves access to destinations and goods without increasing sprawl.
- 5) Limits the recommendations to only apply to passenger vehicles, thus excluding recommendations on mototrucks, truck tractors, or buses.

EXISTING LAW:

- 1) Authorizes the operation of autonomous vehicles on public roads for testing purposes under certain circumstances specified in regulations adopted by DMV.
- 2) Prohibits the operation of autonomous vehicles on public roads for non-testing purposes unless the manufacturer of the vehicles submits an application to DMV that is approved pursuant to DMV regulations.
- 3) Requires DMV, by January 1, 2015, to adopt regulations setting forth requirements for the application to operate autonomous vehicles on public roads for non-testing purposes.
- 4) Requires DMV to approve an application submitted by a manufacturer for the operation of autonomous vehicles for non-testing purposes if DMV finds that the applicant has submitted all information and completed testing necessary to satisfy DMV that the autonomous vehicles are safe to operate on public roads and the applicant has complied with all requirements specified in DMV regulations.
- 5) Authorizes DMV to impose additional requirements it deems necessary to ensure the safe operation of autonomous vehicles if those vehicles are capable of operating without the presence of a driver inside the vehicle.

- 6) Requires California's 18 Metropolitan Planning Organizations (MPOs) and 26 Regional Transportation Planning Agencies (RTPAs) to prepare a long-range (20-year) plan, the regional transportation plan (RTP), which identifies the region's vision and goals and how to implement them.
- 7) Requires ARB to set regional targets for MPOs, every eight years, for GHG emissions reductions from the automobile and light truck sector for 2020 and 2035. Authorizes ARB to review and update the targets after four years, if needed.
- 8) Requires ARB to work with the affected region on the target setting process and authorizes MPOs to recommend a target for the region.
- 9) Requires each MPO to develop a sustainable communities strategy (SCS), as part of its RTP, to coordinate transportation and land use planning to meet its regional target for the reduction of GHG emissions.
- 10) Requires ARB to prepare a report to assess the progress of the state's 18 MPOs in meeting their regional GHG targets.

FISCAL EFFECT: According to the Senate Appropriations Committee, estimated one-time OPR costs of up to \$100,000 for staff and administrative support to convene meetings of the working group, conduct research, and draft policy recommendations that further specified principles.

COMMENTS: From 2000 to 2017, 620,709 individuals were killed in a car accident on American roads. If the 2018 numbers are similar to the ones in 2017, then more Americans would have died on the roads in the last 18 years than in combat since the turn of the 20th century. According to the National Highway Traffic Safety Administration (NHTSA), 94% of all vehicle accidents are the result of human error. The advent of automated vehicles (AVs) that are capable of driving better than humans has the potential to save tens of thousands of people a year, but only if the companies developing AV's can meet the incredibly difficult programming challenges ahead of them.

The programming challenge behind AVs is not one of intelligence, but one of perception. Vehicles need to be able to perceive unexpected, rare events. As noted in *Driverless: Intelligent Cars and the Road Ahead*, roboticists have given the name of the unexpected rare events that take one percent as corner cases. The more corner cases that exist, the more difficult it is to program artificial intelligence to react. Not only do cars need to be able to anticipate these corner cases, but they also need to be able to perceive various road signs and signals, including temporary ones established for changing conditions.

The difficulty of developing AVs has been a lack of computing power for a machine to properly have *machine vision*. In 2012, a major breakthrough occurred that has allowed for the development of AVs: *Deep learning*. Deep learning has made it so software can correctly classify random objects in thousands of digital images, granting the foundation for artificial perception.

In 2012, the Legislature passed SB 1298 (Padilla), Chapter 570, Statutes of 2012, which permitted AVs to be operated on public roads for testing purposes by a driver under certain conditions. In 2014 DMV released regulations to allow for the testing of AV's with a test driver, and in April 2018 DMV finalized regulations for the testing and deployment of AV's on public roads without a driver, with certain limitations. 61 companies currently have a testing permit with a driver, and one company has received a testing permit without a driver. No companies have received a deployment permit.

Despite the potential for AVs to save thousands of lives, many Americans are skeptical about their safety. A Pew Research Poll found that nearly 60% of Americans say they would not want to ride in a driverless vehicle. Of those who do not want to ride in an AV, 7 of 10 mention a lack of trust, a fear of losing control, and/or general safety concerns.

According to the author, "SB 59 calls on OPR to convene an Autonomous Vehicles Smart Planning Task Force to develop recommendations to ensure that the deployment of autonomous vehicles supports our state's environmental and equity goals instead of hindering them. Unless we develop carefully considered policies, the promise of autonomous vehicles leading to a better quality of life, could instead result in unintended consequences that exacerbate our already daunting challenges."

OPR was created by statute in 1970 as part of the Office of the Governor, and serves the Governor and their Cabinet as staff for long-range planning and research and constitute the comprehensive state planning agency. OPR's primary function has been drafting CEQA guidelines for adoption by the Secretary of Natural Resources.

In 2018, OPR convened a multi-agency task force, similar to the one in this bill, and published a set of principles it believed should be followed to ensure AVs are in alignment with the public interest of the State of California. These principles are largely reflected in this bill. These principles include:

- 1) Maximizing the deployment of shared-use vehicles as an alternative to personal car ownership;
- 2) Maximizing ride-sharing by encouraging pooling, prioritizing pooled vehicles' mobility and providing for shared-vehicle passenger safety and comfort;
- 3) Maximizing the deployment of AVs as low emission vehicles in the near term and zero-emission in the long term;
- 4) Promoting use of vehicles that are sufficiently sized for the trip purpose;
- 5) Promoting multimodal transportation use;
- 6) Facilitating compact infill development rather than accelerating sprawl;
- 7) Prioritizing people rather than vehicles; and
- 8) Improving affordable access to destinations.

On January 26, 2018, Governor Brown issued Executive Order B-48-18, calling for the deployment of 5 million new zero emission vehicles (ZEVs) on California roads by 2030. He also released the 2018 ZEV Action Plan from the Governor's Interagency Working Group on Zero-Emission Vehicles. In this report, the Governor called for OPR and ARB to lead an autonomous vehicle interagency group to determine policies necessary to ensure the rise of autonomous transportation benefits all Californians, both environmentally and economically. It calls for OPR to consider, among other issues, the intersection of autonomous and ZEV

technology, including fleets, rideshare, transit and support infrastructure, as well as implications of AVs on land use and vehicle miles traveled.

According to the Union of Concerned Scientists, one of the sponsors of this bill, “We need the state to take initiative to ensure self-driving car technologies lead us down a path that supports, rather than undermines, existing climate, transit, and public health goals. SB 59 would establish as the policy of the state a set of important principles related to AV deployment, such as maximizing shared-use of vehicles, rapidly shifting toward the use of zero-emission vehicles, and facilitating compact, infill development. SB 59 also establishes an interagency working group to be led by the Governor’s Office of Planning and Research, in coordination with the California Air Resources Board. The interagency working group will help the state avoid pitfalls and challenges AVs pose to the sustainability of our transportation system and recommend policy and planning solutions to the Legislature. In short, while AVs may be able to drive themselves, it is up to state decision makers to steer them in the right direction.”

The California Chamber of Commerce is opposing this bill for several reasons. It believes that the bill fails to take a technology neutral approach, excludes industry stakeholders, and fails to prioritize safety. “As currently drafted, the bill excludes the entities developing AV technology from participation on the working group, except by invitation. Industry plays a crucial role in on-the-ground impacts to products and services they are developing. Inclusion of regulated entities is crucial to develop sound policy that meets the reality of how technology is deployed.”

The Personal Insurance Federation of California will support this bill if amended to include representatives from outside government. They argue, “While we appreciate the expertise of the state entities included in the working group, we believe that such an important and far-reaching effort should include representatives from outside of state government as well. Insurers have a long history of advocating for the improvement of auto and highway safety for the benefit of the general public. Insurers have been a key stakeholder and thought leader on autonomous vehicle issues nationally and in conjunction with the development of the California Department of Motor Vehicle’s regulations on autonomous vehicles. Therefore, we believe this bill should include amendments to add representatives from the insurance industry, and other non-governmental entities with appropriate expertise, to the workgroup. The additional knowledge and experience provided by insurers will help the interagency working group make better-informed decisions on autonomous vehicle technology, which will benefit every Californian.”

Committee concerns. This legislation seeks to codify the work that OPR has already begun doing and that the previous Governor, by Executive Order, has already requested. Nothing is preventing the current Governor’s office from continuing this task force. In fact, OPR has indicated to this committee that it does plan on continuing the work of the task force that it created on AVs.

This bill provides almost no legislative input for the existing task force, as it simply restates the principles created by OPR while placing no requirements for non-governmental entities to participate in the conversations to develop policy recommendations that may ultimately be presented to the Legislature. Instead the bill leaves it to the discretion of OPR to choose who, if anyone, to invite to the task force. This can potentially lead to the danger of confirmation bias, as the bill allows OPR to only bring organizations to the table that already agree with the principles that OPR developed, and requires the task force to develop policies based on those principles.

The Legislature has no reason to believe that OPR will in fact invite organizations that it may disagree with, or anyone at all, as OPR has informed this committee that they formed their original principles without any participation from outside groups.

OPR has never had a statutorily created task force, and indicated to the committee that they regularly convene bodies that they believe are not subject to the Bagley-Keene Open Meetings Act. While this bill provides that the public should have a means of providing input to the task force, this input could be limited to allowing the submission of letters.

While OPR may have expertise in planning and land use, it has generally not been tasked with developing transportation policy. Further, it has little to no independence from the Governor, as OPR staff are part of the Governor's office.

Further, OPR's work is already being incorporated by other state agencies. The Legislature authorizes ARB to set GHG emissions reduction targets for local governments, specifically around planning and land use. The Legislature passed SB 375 (Steinberg) Chapter 728, Statutes of 2008, which aligns transportation planning, land use and housing to reshape development in communities. SB 375 authorizes ARB to set GHG emissions reduction targets for each of the state's 18 MPO regions. The MPOs work with ARB, exchanging technical data, to set the targets, including recommending a target for their region. In setting the targets ARB must take certain factors into account, such as considering the likely reductions that will result from actions to improve the fuel efficiency of the statewide fleet and regulations related to the carbon content of fuels. In ARB's 2018 Progress Report on SB 375, ARB notes that the state has already initiated a State Multi-Agency Workgroup on Automated Vehicles to address deployment of connected and automated vehicles in California (the task force lead by OPR).

Considering the past history of Governors vetoing bills that call for task forces, the Legislature should consider if it should ask the Governor to continue work that it is already doing on AVs, or rather should call for a larger task force that is greater in scope and comes from an independent agency that has a history of holding open meetings and working on task forces with competing voices.

The California Transportation Commission (CTC) is an independent agency responsible for programming and allocating funds for the construction of highway, passenger rail, transit and active transportation improvements. The Commission also advises CalSTA and the Legislature in formulating and evaluating state policies and plans for California's transportation programs. The Commission regularly holds open meetings across the state, and has experience running task forces with opposing viewpoints. For example, the Legislature recently tasked CTC to form a task force to look at a road usage charge including privacy rights advocacy organizations, regional transportation agencies, the telecommunications industry, highway user groups and data security groups.

Given the need for a holistic, comprehensive, independent evaluation of the many potential policy impacts involving AV deployment, the committee suggests amendments to have CTC lead a separate autonomous vehicle task force from the one OPR is already doing. This task force will share some of the same goals as OPR, including looking at policies that encourage multimodal transportation, looking at ways to influence the way people travel (while taking a technology neutral approach), and policies that further the state's environmental, public health, and energy objectives; while also looking at areas OPR has not considered, including road safety,

the future of work, infrastructure improvements, insurance, and accessibility for individuals with disabilities.

Like previous bills that have passed this committee, the task force should also be required to involve stakeholders that have an interest in the ways AVs are developed or could provide valuable insight for policies that this Legislature should consider, including: labor unions, the insurance industry, auto manufacturers, AV technology companies, research institutions, environmental advocacy organizations, disability rights groups, bicycle and pedestrian safety organizations, motorist service member organizations and transportation agencies.

The CTC should also consult with OPR and consider the principles they have released.

As such, the committee proposes striking all of the contents of the existing bill and replacing it with the following:

- (a) The Chair of the California Transportation Commission shall establish an advisory committee known as the California Council on the Future of Transportation.
- (b) The council shall provide to the Governor and the Legislature with recommendations for changes in state policy to ensure that this state continues to be the world leader in autonomous, driverless, and connected vehicle technology.
- (c)(1) The council created under this subsection shall consist of all of the following members selected by the Chair of the Commission, all of whom shall serve without compensation:
 - (A) One or more individuals who represent insurance interests.
 - (B) One or more individuals appointed who represent a bona-fied labor organization that represents transportation workers.
 - (C) Three or more individuals appointed who is representative of local government from a rural, suburban and urban area of the state.
 - (D) One or more individuals who are representative of a research institution.
 - (E) One or more individuals who represent a vehicle manufacturer or an organization that represents vehicle manufacturers.
 - (F) One or more individuals who represent a technology company that develops autonomous technology or an organization that represents technology companies that are developing autonomous technology.
 - (G) One or more individuals who represent a disability rights organization.
 - (H) One or more individuals who represent a local transportation agency.
 - (I) One or more individuals who represent a statewide motorist service membership organization.
 - (J) One or more individuals from a bicycle or pedestrian safety organization.
 - (K) One or more individuals from an environmental advocacy organization.
- (c)(2) The following individuals shall also serve on the council, without compensation:
 - (A) The Director of the Department of Transportation or their designee.
 - (B) The Commissioner of the California Highway Patrol or their designee.
 - (C) The Director of the Department of Insurance or their designee.
 - (D) The Director of the Department of Motor Vehicles or their designee.
 - (E) The Director of the Governor's Office of Business and Economic Development or their designee.

(F) The Chair of the California Air Resources Board or their designee.

(d)(1) The council shall gather public comment on issues and concerns related to autonomous vehicles and shall submit recommendations for statewide policy changes and updates to the Legislature no later than July 1, 2022, and shall continue to make recommendations biannually thereafter, or more frequently in the commission's discretion.

(2) A report submitted pursuant to this subdivision shall be submitted in compliance with section 9795.

(e) The council may include in its report submitted pursuant to subdivision (d), but is not limited to, policy recommendations on the following topics:

(1) The Safety for all road users in the near and long term, including potential changes to traffic laws, and licensing and registration, accounting for changes in autonomous vehicle technology over time.

(2) Infrastructure improvements that may be needed for the safe operation of autonomous vehicles.

(3) Ways to influence how individuals travel.

(4) Furthering the state's environmental, public health, and energy objectives.

(5) Promoting the integration of new mobility services with walking, bicycling, transit and other modes of travel.

(6) Labor and economic impacts that include, but are not limited to, potential job loss or work displacement, and job creation.

(7) Increase the availability of accessible mobility options, particularly for individuals with different physical, sensory and cognitive abilities providing accessible physical equipment and communication interfaces.

(8) Potential changes to insurance requirements.

(f) The council may consult with the Office of Planning and Research and may consider the principles established by the California Multi-Agency Workgroup on Automated Vehicle Deployment for Healthy and Sustainable Communities.

(g) This chapter shall remain in effect only until January 1, 2029, and as of that date is repealed.

Double referral: This bill will be referred to the Assembly Communications and Conveyance Committee should it pass out of this committee.

Related legislation: SB 336 (Dodd; 2019) requires an on-board employee when public transit agencies deploy autonomous transit vehicles. This bill is pending in this committee.

Prior legislation: SB 936 (Allen; 2018) would have required OPR to convene an Autonomous Vehicles Smart Planning Task Force. This task included representatives from the University of California and other academic institutions, local government and metropolitan planning organizations, transit agencies, automated vehicle and electric vehicle manufacturers,

transportation network companies, labor organizations, clean transportation organizations, environmental organizations, property casualty companies or property casualty insurance trade organizations, and disability rights organizations. This bill died in the Senate Appropriations Committee.

SB 802 (Skinner, 2017) would have established the Emerging Vehicle Advisory Study Group lead by OPR to review and advise the Legislature on policies pertaining to new types of AVs operating in California. The study group included two members representing autonomous vehicle manufacturers, a member from a public health or clean air advocacy organization, a member from a technology industry organization, a member of labor organization representing commercial drivers, and the insurance industry. SB 802 died in the Assembly Appropriations Committee.

REGISTERED SUPPORT / OPPOSITION:

Support

Union of Concerned Scientists (Co-Sponsor)
Calstart Inc. (Co-Sponsor)
Advanced Energy Economy
California Electric Transportation Coalition (if Amended)
Clean Power Campaign
Community Action to Fight Asthma
Local Government Commission
Mayor of Berkeley, Jesse Arreguin
Mayor of San Jose, Sam Liccardo
Mayor of San Ramon, Bill Clarkson
Mayor of Santa Clara, Lisa Gillmor
Mayor of Santa Cruz, Martine Watkins
Mayor of Stockton, Michael Tubbs
Personal Insurance Federation of California (if Amended)

Oppose

Alliance of Automobile Manufacturers
Calchamber
California Chamber Of Commerce
California Manufacturers & Technology Association
Silicon Valley Leadership Group
Technet-Technology Network

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