



ADVOCATES
FOR HIGHWAY
& AUTO SAFETY

July 30, 2024

The Honorable Maria Cantwell, Chair
The Honorable Ted Cruz, Ranking Member
Committee on Commerce, Science and Transportation
United States Senate
Washington, D.C. 20510

Dear Chair Cantwell and Ranking Member Cruz:

In advance of tomorrow's Executive Session, which includes consideration of legislation on artificial intelligence (AI), Advocates for Highway and Auto Safety (Advocates) seeks to provide information on this issue pertaining to vehicles with automated driving systems (ADS) and autonomous vehicles (AVs), as well as the status of traffic safety on our Nation's roadways.

Motor Vehicle Deaths and Injuries Remain Historically High

In 2022, an average of 116 people were killed every day on roads in the U.S., totaling just over 42,500 fatalities.¹ An additional 2.38 million people were injured.² This represents a 29 percent increase in deaths in just a decade.³ Early projections for 2023 traffic fatalities remain at a similar historic high level; nearly 41,000 people are estimated to have died that year.⁴ Tragically, 7,522 pedestrians and 1,105 bicyclists were killed in 2022, representing a 57 percent and 48 percent increase respectively in the past decade.⁵ Fatalities of motorcyclists increased as well, resulting in 6,218 deaths.⁶ In crashes involving large trucks, 5,936 people were killed and over 160,000 people were injured.⁷

Several leading behavioral issues continue to be leading factors in traffic fatalities including alcohol-impairment, speeding and lack of restraint use.⁸ Driver distraction is also known to be a principal cause of motor vehicle crashes.⁹ In 2022, alcohol-involved crashes claimed the lives of 13,524 people, speeding-related traffic crashes killed 12,151 people, and 11,302 people killed in crashes did not buckle up, when restraint use was known.¹⁰ This dangerous road epidemic is predicated on dangerous roadway design (*See 2024 Dangerous by Design [report](#)*).

Additionally, in 2021, the most recent year for which data is available according to the Non-Traffic Surveillance (NTS) system, an estimated 3,990 people were killed in non-traffic motor vehicle crashes, an increase of 26 percent from 2020.¹¹ And, since 1990, at least 1,098 children have died in hot cars, including 15 children this year.¹² These issues are persistent, and the solutions are known and available, yet remain underused, underfunded, or unregulated and therefore not required as standard equipment in vehicles.

The financial impact of motor vehicle crashes on our economy and our families is staggering. Conservatively, the annual economic cost of motor vehicle crashes is approximately \$340 billion (2019 dollars).¹³ Essentially, every person living in the U.S. pays an annual "crash tax" of over \$1,000. These crashes negatively impact businesses as well. According to the Network of Employers for Traffic Safety, the total cost of crashes to employers is more than \$72 billion (2019 dollars).¹⁴ Moreover, the total value of societal harm from motor vehicle crashes in 2019 was nearly \$1.4 trillion.¹⁵ The carnage and expense borne from crashes on our roadways are unacceptable and preventable.

Safety Technology Verified to Save Lives and Prevent Injuries is a Key Component of the Urgently Needed Solution

Advocates continue to enthusiastically champion proven vehicle safety technology for good reason -- it is one of the most effective strategies for preventing deaths and injuries. The National Highway Traffic Safety Administration (NHTSA) has estimated that between 1960 and 2012, over 600,000 lives have been saved by motor vehicle safety technologies.¹⁶ In 1991, Advocates led the coalition that supported enactment of the bipartisan Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991¹⁷ which included a mandate for front seat airbags as standard equipment. As a result, by 1997, every new car sold in the United States was equipped with this technology and the lives saved have been significant. Airbags have saved an estimated 50,457 lives from 1987 to 2017, according to NHTSA.¹⁸

Advocates continued to build on this success by supporting additional proven lifesaving technologies as standard equipment in all vehicles in other federal legislation and regulatory proposals. These efforts include: tire pressure monitoring systems;¹⁹ rear outboard 3-point safety belts;²⁰ electronic stability control;²¹ rear safety belt reminder systems;²² brake transmission interlocks;²³ safety belts on motorcoaches;²⁴ rear-view cameras;²⁵ safer power window switches;²⁶ advanced driver assistance systems (ADAS);²⁷ advanced impaired driving prevention technology;²⁸ rear designated seating position alert (“hot cars”);²⁹ enhanced vehicle hood and bumpers to better protect vulnerable road users;³⁰ and, advanced head lamps.³¹

Requiring proven safety technologies as standard equipment in vehicles also promotes traffic safety equity for new car buyers, the next generation of used car buyers, other vehicle occupants and road users outside the vehicle when the rulemaking includes them, as it should when applicable. Rulemaking accelerates fleet penetration and amplifies the safety benefits of the technology while curbing its cost due to economies of scale.

Voluntary Agreements Are Insufficient

In stark contrast to the effectiveness of federal standards and proven safety technology, voluntary agreements and non-binding frameworks have been found to be ineffective. In fact, Congress rejected voluntary standards over 50 years ago when it passed the National Traffic and Motor Vehicle Safety Act in 1966. As the Senate Committee Report stated, “The promotion of motor vehicle safety through voluntary standards has largely failed. The unconditional imposition of mandatory standards at the earliest practicable date is the only course commensurate with the highway death and injury toll.”³²

Voluntary agreements typically produce weak, limited outcomes that do not represent the best practices and state-of-the-art technology or systems. A non-binding framework or list of best practices for AI that may be used in safety impacting technologies, including those for driving, will similarly not meet the moment. For example, the voluntary agreement announced by automakers in September 2019 on technology to prevent hot car deaths of children prolonged the timeline to get this equipment into new cars even though it is available at a very minimal cost now.³³ The agreement also failed to include the important component that the systems must detect and alert to the presence of children who have been unknowingly left in or gained access to cars.³⁴ Over two decades ago, in April 2001, General Motors (GM) announced it would equip its new cars with technology that “can detect motion as subtle as the breathing of an infant sleeping in a rear-facing child safety seat” with the intent to begin rollout in 2004.³⁵ Yet, to date GM and most other original equipment manufacturers (OEMs) still do not equip vehicles with such a safety system, and systems it does install only monitor the vehicle’s rear doors instead of using a sensor to detect the presence of a child. In fact, Kids and Car Safety has documented

hot cars incidents involving seven children who have died in vehicles equipped with door sequencing features.³⁶ Since 1990, nearly 1,100 children have died in hot car incidents and at least another 7,500 survived with varying types and severities of injuries, according to data collected by Kids and Car Safety.³⁷

Most recently, the U.S. Department of Transportation (DOT) issued a Final Rule on automatic emergency braking (AEB) for light vehicles which supports this position, “Voluntary measures are intended to supplement rather than substitute for the FMVSSs [Federal Motor Vehicle Safety Standards], which remain NHTSA’s core method of ensuring that all motor vehicles can achieve an adequate level of safety performance.”³⁸

Experimental Autonomous Driving Technology Remains Unproven

Currently, vehicles are being equipped with unregulated and unproven systems that perform partial driving automation as well as full driving automation including AVs and being driven on public roadways. On the release of its study, *Convenience or safety system? Crash rates of vehicles equipped with partial driving automation*, July 2024, the Insurance Institute for Highway Safety (IIHS) noted, “With no clear evidence that partial automation is preventing crashes, users and regulators alike should not confuse it for a safety feature.”³⁹ It is important to note that AVs used solely for testing do not have to comply with current FMVSS, including those that provide occupant protection.⁴⁰ Further, companies can apply for exemptions from FMVSS.⁴¹

Additionally, the Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence issued on October 30, 2023, notes that AI “holds extraordinary potential for both promise and peril” and “[h]arnessing AI for good and realizing its myriad benefits requires mitigating its substantial risks.” The U.S. DOT must ensure proper safeguards and regulations are established for AI used in vehicle safety applications.

Numerous dangerous and troubling safety incidents involving vehicles equipped with ADS have occurred on public roads in the U.S., mostly resulting from the operations of self-driving taxis in San Francisco, California and Austin, Texas.⁴² In addition, NHTSA is currently investigating Tesla’s Autopilot System, Ford’s BlueCruise, and the AV operations of Waymo and Zoox.⁴³ Furthermore, as of July 29, 2024, NHTSA’s Standing General Order (SGO) 2021-1, which requires manufacturers to report certain crashes involving vehicles equipped with ADS or SAE Level 2 ADAS, has resulted in information collected on approximately 665 crashes involving ADS and 1,553 involving ADAS. These include 37 crashes resulting in a fatality.⁴⁴ Moreover, millions of vehicles with partial driving automation systems have been subject to safety recalls.⁴⁵

Many promises have been touted about AVs bringing reductions in motor vehicle crashes and resultant deaths and injuries, lowering traffic congestion and vehicle emissions, expanding mobility and accessibility, improving efficiency, and creating more equitable transportation options and opportunities.⁴⁶ However, as Transportation Secretary Buttigieg and others within the auto industry have acknowledged, these outcomes are far from certain.⁴⁷ Secretary Buttigieg noted that AVs need to be held to a higher standard, “The standard should be, don’t just be as good as a human driver. Be much, much better.”⁴⁸

Some supporters of AVs often assert that these vehicles will improve roadway safety by inaccurately stating that 94 percent of crashes are due to human error pointing to a report from NHTSA as support for this misleading claim. However, the agency stated in the same document with this statistic that

“[a]lthough the critical reason is an important part of the description of events leading up to the crash, **it is not intended to be interpreted as the cause of the crash nor as the assignment of the fault to the driver, vehicle, or environment** (*emphasis added*).”⁴⁹ In addition, NTSB Chair Jennifer Homendy has declared that using the statistic in such a manner is “dangerous” and “[a]t the same time it relieves everybody else of responsibility they have for improving safety, including DOT.”⁵⁰ Some proponents of AVs also have claimed that these vehicles will prevent 90 percent of crash fatalities.⁵¹ Yet, no credible research supporting such an assertion is cited.

In sharp contrast to what is happening in the U.S., other countries are taking a more calculated, careful, and cautious approach to the development of AVs.⁵² Often-repeated claims about the U.S. “falling behind” other countries in the “race” for AVs are simply not true nor supported by research. For example:

- China continues to require permits or restricts operations of AVs on its roads to only those areas approved by the authorities.⁵³
- Germany continues to require permits, approvals, and limits areas of operation for AVs.⁵⁴
- In Japan, the introduction of Level 4 vehicles is controlled and limited to specific areas, operations, and oversight.⁵⁵
- The latest United Nations Economic Commission for Europe (UNECE) regulations limit operations to restrict risks and oversee approval through testing and other requirements.⁵⁶

In sum, no country is selling fully automated vehicles for unfettered use to the public and by many accounts, none will be for a significant amount of time.⁵⁷ According to the most recent KPMG analysis, the U.S. ranks fourth in the world for AV readiness, while China stands at number twenty. The U.S. is not lagging other countries in allowing AVs to go to market, but we are behind in establishing comprehensive regulations to ensure public safety will not be jeopardized or diminished.

Considering the current inadequate performance of partial automation and fully autonomous technologies, it is unsurprising that the public has significant concerns. In February 2023, Advocates commissioned a public opinion poll which found that 83 percent of respondents were concerned with sharing the road with driverless cars. This number increased to 86 percent of respondents regarding driverless trucks.⁵⁸ Yet, 64 percent of respondents indicated that their concerns would be addressed if the vehicles were required to meet minimum government standards.⁵⁹

Autonomous Driving Technology Policy: Protecting Public Safety Must be First and Foremost

Any federal legislation that is advanced by Congress likely will set AV policy for decades to come and must include minimum standards to improve safety on our Nation’s roads before these vehicles are sold in the marketplace. In the meantime, it is essential that NHTSA continues to collect and evaluate the data obtained through the SGO involving these technologies, as well as improve the reporting requirements in the SGO as enumerated in letters from members of Congress to the U.S. DOT.⁶⁰

To identify a people-and-safety-first path forward on AVs, Advocates and numerous stakeholders developed the “[AV Tenets](#).” These sound and sensible policy positions should be a foundational part of any national AV policy. The AV Tenets are based on expert analysis, real-world experience, and public opinion. They have four main categories including: 1) prioritizing safety of all road users; 2) guaranteeing accessibility and equity; 3) preserving consumer and worker rights; and, 4) ensuring local control and sustainable transportation. They are supported by a coalition of more than 65 organizations representing consumers, public health and safety experts, pedestrians, bicyclists, disability rights activists, emergency responders, law enforcement, labor and others. Requiring that AVs meet minimum

performance standards, including for cyber security, and that operations are subject to adequate oversight, including a comprehensive database accessible by vehicle identification number (VIN) with basic safety information, are fundamental prerequisites and will save lives and boost consumer confidence in this burgeoning technology.

Conclusion

While Advocates supports the deployment of technology verified by independent research to prevent crashes and reduce the resulting deaths and injuries, the implementation of AI into our Nation's transportation system without proper safeguards and regulations could needlessly jeopardize public safety. As evidenced by several fatal crashes involving cars equipped with ADS and partial driving automation technology, federal regulations are essential to ensuring developing technologies work as needed to prevent crashes, fatalities and injuries, perform as the user expects and as necessary for systems that require an alert driver, and do not present an unreasonable risk to drivers and passengers as well as those outside of the vehicle including emergency responders.⁶¹ A people-and safety-first approach to development and deployment of self-driving systems is necessary, and this proactive path is achievable as demonstrated by the AV Tenets.

Thank you for your consideration of these issues. We look forward to continuing to work with this Committee to improve safety on our Nation's roadways.

Sincerely,



Catherine Chase, President

cc: Members of the U.S. Senate Committee on Commerce, Science and Technology

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- ²³ *Id.*
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- ²⁷ Infrastructure Investment and Jobs Act, Pub. L. 117-58 (Nov. 15, 2021).
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