



Statement of

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Before the

**Committee on Transportation & Infrastructure
Highways & Transit Subcommittee
United States House of Representatives**

Hearing on

**“The Future of Automated Commercial Motor Vehicles: Impacts on Society, the
Supply Chain and U.S. Economic Leadership.”**

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- **INTRODUCTION:**

Chairman Crawford, Ranking Member Holmes Norton, and Members of the Highways & Transit Subcommittee, I appreciate the opportunity to testify before you today on behalf of the American Trucking Associations (ATA).¹ ATA is a 90-year-old federation and the largest national trade organization representing the interests of the U.S. trucking industry, including the approximately 8.4 million men and women working in trucking-related jobs.² Our fifty-state federation encompasses 37,000 motor carriers as well as their corresponding suppliers. ATA represents every sector of the industry, from less-than-truckload to truckload, agriculture and livestock transporters to auto haulers and movers, and large motor carriers to mom-and-pop one-truck operations.

I'd like to begin my testimony by noting that today's hearing coincides with National Truck Driver Appreciation Week, an annual celebration honoring all professional truck drivers for their hard work and fortitude in tackling one of our economy's most demanding and essential jobs. Truck drivers are the unsung heroes of our supply chain, each year driving over 320 billion miles—the equivalent of nearly 13 million trips around the globe—to deliver roughly 12 billion tons of freight.³ Every one of those miles represents a stocked store shelf, a package placed on a household doorstep, materials delivered to a manufacturer, and equipment conveyed to a construction site. These professional men and women deliver the goods we rely on safely, securely, and on time while serving as role models in their communities. Representing and supporting our nation's truck drivers is one of my highest honors as ATA President and CEO, and I am privileged to celebrate those men and women.

It is not lost on me that during the week that we honor our nation's truck drivers I am testifying about a technology that some fear may eliminate the role of the driver. However, we must realize that development of automated technology for vehicles does not mean that all vehicles will become "driverless vehicles" and that truck driving jobs will simply be eliminated. The reality is much more complex. Given the variety of freight movement – think about liquids, livestock, hazardous material, large construction equipment, and oversize loads – and the variety of road, terrain, and weather conditions throughout the country, there will continue to be a role and need for drivers as part of a logistics system that includes automated trucks. ATA believes that automated trucks will be a tool that will help improve the efficiency of freight movement and help address a shortage of drivers, not replace them. Driver responsibilities may adjust over time with deployment of automated technologies, but the industry continues to need drivers, our greatest asset.

It is both timely and important that the Highways and Transit Subcommittee holds today's hearing to consider the future of automated commercial motor vehicles, as well as their likely impact on society, the supply chain and U.S. economic leadership. This subcommittee knows well that trucking is the dynamic lynchpin of the U.S. economy. More than 80% of U.S. communities rely *exclusively* on trucking to meet their freight transportation needs, and trucking currently moves more than 70% of the nation's annual freight tonnage.⁴ Over the next decade, trucks will be tasked with moving 2.4 billion more tons of freight than they do today, and trucks will continue to deliver the vast majority of goods to

¹ The American Trucking Associations is the largest national trade association for the trucking industry. Through a federation of 50 affiliated state trucking associations and industry-related conferences and councils, ATA is the voice of the industry America depends on most to move our nation's freight.

² *American Trucking Trends 2023* American Trucking Associations (August 2023)

³ *Ibid*

⁴ *U.S. Census Bureau Commodity Flow Survey*, U.S. Census Bureau, 2017.

American communities.⁵ It is no coincidence that an industry so essential to American productivity is at the forefront of such exciting innovation and ingenuity.

The COVID-19 pandemic opened Americans' eyes to the convenience and reliability of delivery, and as we emerge from the pandemic, Americans expect their goods to be delivered even faster, more cheaply, and more efficiently. Ongoing supply chain disruptions have exposed the need for greater flexibility to meet these new challenges. ATA believes automated driving systems (ADS) will significantly enhance the safety, efficiency, and productivity of the U.S. freight and logistics system and provide 21st century solutions to meet 21st century challenges.

The benefits of this technology are recognized globally, and the United States is now competing with other nations like China to assert dominance in this burgeoning space. ATA encourages Congress and federal agencies to develop policies that will foster innovation and ensure that America does not fall behind its global competitors in the development of this important technology. The absence of a federal framework that encourages the development of 21st century solutions right here in the United States amounts to a competitive advantage for other nations.

The trucking industry has a substantial stake in the enhancements to road safety that automated and connected vehicle technology will provide. America's roads and bridges are truck drivers' workplace, and safety is of paramount importance. The safety gains achieved by removing human error--as well as the additional economic and societal benefits--are very enticing to an industry that already spends at least \$10 billion annually on safety, including technology enhancements, to help ensure that drivers and passengers of all vehicles make it safely to their destination.⁶

As the Transportation & Infrastructure Committee, which maintains jurisdiction over automated vehicle technologies in commercial motor vehicles, considers legislation to guide federal policy and regulations on autonomous vehicles (AVs), ATA encourages a multi-modal approach that prioritizes commercial motor vehicles, heavy specialty vehicles, trailer-combination vehicles, and passenger vehicles equally. We strongly recommend that any legislation establishing federal oversight of the development and deployment of AV technologies consider all road users, including passenger vehicles, commercial trucks, buses, as well as the supporting infrastructure. We stand ready to support and work hand-in-hand with you in that effort.

We thank and commend you for holding this important hearing today and welcome the opportunity to engage on this critical issue. National Truck Driver Appreciation Week is an annual reminder that we must continue to do more to support the hard-working individuals who drive this economy, and a federal framework that supports innovation will greatly improve safety, efficiency, and productivity on our nation's roadways, while strengthening our supply chains and ensuring the nation's long-term global economic competitiveness.

- **THE CURRENT STATE OF THE INDUSTRY:**

Six years ago to the day, I testified before the Senate Committee on Commerce, Science and Transportation on this very issue and shared the trucking industry's perspective on how the deployment

⁵ *Freight Transportation Forecast 2020 to 2031*, American Trucking Associations, 2020.

⁶ ATA Safety Investment Study, 2016, <http://www.trucking.org>

of automated trucks might play out.⁷ That discussion focused on the potential safety benefits and the opportunities to improve the resiliency of our supply chain. I testified on timelines and relayed the difficulty of envisioning a future where driving jobs would be obsolete. Everyone agreed that safety was paramount, and I underscored that testing would follow deliberate and measured steps towards maturity. Since that hearing, we have seen the automated vehicle technology available for heavy-duty trucks and vehicles of all sizes grow by leaps and bounds to the cusp of commercialization. In the six years since my previous testimony, Congress has missed the opportunity to take a leadership role in overseeing the development and deployment of these technologies. But the opportunity is still at hand for the federal government's leadership role to now grow.

Our predictions from six years ago were accurate. Developers have built robust and safe testing programs across many different parts of the trucking industry. We see automated trucks in development for heavy-duty and medium-duty use, for highway and off-highway applications, and for public roads and private yards. These developments are data-driven and based on needs identified by industry for particular sectors and use cases. There has been no rush to deploy, no flood of driverless trucks on our highways, and no driving jobs lost. Along the way, these companies have been highly regulated and transparent, even by the high standards of our industry. They have submitted voluntary safety self-assessments that detail their processes in depth. They are subject to the National Highway Traffic Safety Administration's (NHTSA) Standing General Order (SGO) and report every incident involving their trucks for public view, regardless of who is at fault.⁸ They have worked with ATA's Technology & Maintenance Council and the Commercial Vehicle Safety Alliance to build a robust inspection program and comply with inspections like every other truck on the road. They have been patiently working with industry partners to understand their needs and concerns. We have seen that automated trucks have not and will not show up everywhere all at once. The developers understand the complexity and diversity of our industry and are carefully following the maturity of the technology.

The timing of this hearing is not a coincidence. We now have a much clearer view of what deployment might look like, and the need for federal leadership is more important than ever. Developers have identified specific over-the-road routes that meet the needs of industry partners, and they are testing their technology to maturity. These routes may be ready for deployment very soon, and federal leadership is vital for success and continued innovation. It is not enough for the federal government to just remove barriers to operation like outdated regulatory language. We need federal leadership to ensure that these vehicles can operate in interstate commerce without disruption. Automation has the potential to dramatically increase our nation's supply chain resiliency, but only if it can operate like other trucks on our roads. The risks of a patchwork of state or local requirements threaten to stifle the innovation before it even has a chance to prove its worth. Kneejerk reactions like AB 316 in California undermine not just the technology itself but our ability to imagine the future. Since I last testified on this topic, we all have had six more years of valuable experience, and the urgency of the moment demands that we move beyond the hype and alarmist predictions for automation in commercial vehicles.

In 2021 the U.S. Department of Transportation (DOT) estimated that adoption of automation in long-haul trucking would increase earnings across all workers, increase overall employment, and increase the US GDP.⁹ The DOT did not find that there would be industry lay-offs except in the most aggressive case of adoption. We have an aging work force and an ongoing driver shortage in trucking. Clearly

⁷ <https://www.commerce.senate.gov/2017/9/transportation-innovation-automated-trucks-and-our-nation-s-highways>

⁸ <https://www.nhtsa.gov/laws-regulations/standing-general-order-crash-reporting>.

⁹ <https://rosap.ntl.bts.gov/view/dot/54596>

there is room for both drivers and automation to build a more efficient and resilient supply chain. The industry is ready for leadership, and Congress and the DOT can help us build that future.

- **RECENT FEDERAL REGULATORY & LEGISLATIVE ACTIVITY:**

In 2017, the U.S. House of Representatives passed the SELF DRIVE Act (H.R. 3388) unanimously, and later that fall, the AV START Act (S. 1885) did not advance beyond consideration by the Senate Commerce Committee. Despite the fact that efforts to enact federal legislation have stalled since 2017, the DOT has continued to use the tools at its disposal to exercise federal oversight and facilitate the safe testing and initial deployments of automated vehicles in the United States. These tools include guidance documents such as AV 4.0¹⁰ (issued in 2020) and DOT's 2021 *Automated Vehicles Comprehensive Plan*¹¹, which identify roles and responsibilities of the DOT and other stakeholders, and NHTSA's SGO¹² (issued in 2021), which ensures that DOT receives timely information on safety-related incidents involving ADS-equipped vehicles on public roads. Another DOT tool, the exemption process, provides a means for the Federal Motor Carrier Safety Administration (FMCSA) and NHTSA to evaluate and approve on a temporary basis alternative means to meet or exceed existing safety standards that were written with the implicit assumption of the presence of human drivers and traditional driver controls. Additionally, and importantly, NHTSA maintains its recall authority, which allows the Agency to recall vehicles or equipment that pose an unreasonable risk to safety even when there is no applicable Federal Motor Vehicle Safety Standard (FMVSS).¹³ In the near term, these tools establish an initial pathway for testing and limited deployment of ADS-equipped vehicles to demonstrate their positive impact on vehicle safety, transportation system efficiency, and improved mobility for people and goods.

Longer term, as ADS technology matures, it will be necessary for DOT to modernize its regulations to reflect the capabilities of ADS and its integration into commercial vehicle operations. ATA commends FMCSA for seeking supplemental information for its rulemaking on the *Safe Integration of Automated Driving Systems-Equipped Commercial Motor Vehicles*¹⁴ earlier this year, and we look forward to working with FMCSA as the Agency moves forward with this rulemaking. Likewise, ATA commends NHTSA for the recently announced plans to issue an NPRM this fall for the *ADS-equipped Vehicle Safety, Transparency and Evaluation Program (AV STEP)* among other ADS-related rulemaking initiatives.¹⁵ The overall goal for DOT should be to develop a set of regulations that remove unnecessary barriers created by existing rules that did not envision automated driving, while establishing a clear regulatory baseline for companies developing or deploying automated vehicles. An updated federal regulatory framework that reflects the difference between human operators and ADS is critical to preserving a seamless set of safety standards across the country that provides assurance to the public and certainty to companies developing and deploying automated vehicles.

¹⁰ <https://www.transportation.gov/policy-initiatives/automated-vehicles/av-40>.

¹¹ <https://www.transportation.gov/av/avcp>.

¹² <https://www.nhtsa.gov/laws-regulations/standing-general-order-crash-reporting>.

¹³ Understanding NHTSA's Regulatory Tools, DOT HS 808 795, Revised August 2017, page 2. Available at: https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/understanding_nhtsas_current_regulatory_tools-tag.pdf (accessed September 7, 2023).

¹⁴ <https://www.federalregister.gov/documents/2023/02/01/2023-02073/safe-integration-of-automated-driving-systems-ads-equipped-commercial-motor-vehicles-cmvs>.

¹⁵ <https://www.nhtsa.gov/speeches-presentations/automated-road-transportation-symposium-arts23-keynote-address> (accessed September 7, 2023).

Beyond the federal regulatory action being undertaken at DOT, we are aware that Congress is again considering legislative action as well. We commend those efforts and would urge the Transportation & Infrastructure Committee to take part in those discussions and negotiations to ensure that automated commercial motor vehicles are a part of that dialogue.

- **AUTOMATED DRIVING TECHNOLOGY STRENGTHENS HIGHWAY SAFETY:**

The trucking industry has a substantial stake in the success of safe automated and connected vehicle technology. America's roads and bridges are truck drivers' workplace. Safety is not just a slogan; it is of paramount importance. There were 13.9 million medium and heavy-duty trucks registered in the U.S. in 2021, including 4.07 million Class 8 trucks.¹⁶ That same year, medium- and heavy-duty trucks accounted for approximately 10.4% of the vehicle miles traveled.¹⁷ Since deregulation in 1980, both the number of fatal truck crashes and rate of fatalities have declined.¹⁸ However, ATA does acknowledge a recent up-tick in fatal crashes. While there are several factors that have contributed to this, including the overall majority of truck-related crashes being the fault of the passenger vehicle,¹⁹ automated vehicle technology has the potential to decrease fatal crashes.

Safety gains are achievable by removing human error, which is a factor in 87% of large truck crashes²⁰ and 94% of all vehicle crashes.²¹ The additional economic and societal benefits, are very enticing to an industry that - as mentioned previously - already spends at least \$10 billion annually on safety. These investments include deployment of safety technology enhancements that go above and beyond what is mandated by federal regulations. Automated and connected vehicle technology can work together to further reduce or even eliminate these crashes. With these innovations, improvements in safety are only the beginning; we can also make meaningful advances in other important policy areas like reducing traffic congestion and emissions nationwide.

Automated driving systems are the next step in the evolution of currently available safety technologies, and it is critical that federal policies developed for these advances consider *all vehicles* operating on our nation's roadways. These improvements will not be one-size-fits-all technologies, but rather will offer layers of driver assistance that, in some cases, include full automation. While opponents of this safety technology will often refer to it in a negative light, we need to think beyond anecdotes and fearmongering and collect data on the benefits of avoiding accidents, reducing crash severity, mitigating congestion, and improving air quality. Quantifiable factors must guide policy and drive outcomes. Far too often, when we reach barriers in the development of this safety technology, opponents will cite those

¹⁶ S&P Global, *U.S. Freight Transportation Forecast* (2023)

¹⁷ Federal Highway Administration, Highway Statistics, 2021, Table VM-1, accessed online at <https://www.fhwa.dot.gov/policyinformation/statistics/2021/pdf/vm1.pdf>.

¹⁸ Large Truck and Bus Crash Facts 2020, Trends Chapter, Table 4, page 7, Federal Motor Carrier Safety Administration, Washington, D.C. https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2022-10/LTBCF%202020-v5_FINAL-09-20-2022%20508%2010-3.pdf.

¹⁹ *Financial Responsibility Requirements for Commercial Motor Vehicles*, U.S. Department of Transportation, Federal Motor Carrier Safety Administration, January 2013, page xii, footnote 2.

²⁰ Large Truck Crash Causation Study, Federal Highway Administration, July 2007

²¹ Singh, S. (2015, February). Critical reasons for crashes investigated in the National Motor Vehicle Crash Causation Survey. (Traffic Safety Facts Crash Stats. Report No. DOT HS 812 115). Washington, DC: National Highway Traffic Safety Administration.

barriers as a reason for why we should *not* have automated vehicle technologies rather than engaging in conversations with stakeholders as to how we can *overcome* these barriers and advance these meaningful and lifesaving efforts. Holding innovation hostage under the guise of safety considerations is an outdated, performative approach that may appease interest groups but certainly does not advance our common goal of zero highway fatalities. ATA is not the association of “NO” and will always stand committed to work with any and all stakeholders in these discussions.

- **AUTOMATED DRIVING TECHNOLOGY & ADDRESSING CYBERSECURITY:**

As automated vehicle technologies have advanced for both passenger and commercial motor vehicles, some have expressed concerns that the shift to autonomy may pose significant cybersecurity risks. Just as automated driving technology has the potential to bring safety benefits to the motoring public, steps must be taken to ensure that deployment of these technologies do not create vulnerabilities as a result of cybersecurity threats. As with many things in life, including the threat against passenger vehicles, cybersecurity is an important consideration for commercial vehicles.

At an early stage, ATA recognized these threats and has already taken steps to help ensure a robust cybersecurity environment for motor carriers. For instance, in conjunction with ATA’s Technology & Maintenance Council (TMC) and Transportation Security Council (TSC) we have developed the *Fleet CyWatch* program.²² *Fleet CyWatch* assists ATA fleet members in assessing their cybersecurity maturity and shares information with fleets about cyber-threats that may impact their operations. *Fleet CyWatch* coordinates private and federal efforts to provide motor carriers with information and recommendations in the areas of cybersecurity awareness, prevention, and mitigation methods. These efforts compliment industry best practices produced by the Auto-ISAC (Automotive Information Sharing and Analysis Center) with the common objective to demonstrate the industry’s proactive collaboration to protect consumer safety through vehicle cybersecurity.²³

Additionally, TMC’s Fleet Maintenance Management Study group has taken an industry leadership role pertaining to various aspects of cybersecurity through its Cybersecurity Task Force. Among other goals, the Task Force’s mission includes addressing cybersecurity issues and how they can be dealt with when they occur, and more importantly, preventing attacks from occurring in the first place. This task force focuses on creating recommended practices combined with research from other expert sources, such as the National Science Foundation, U.S. Department of Homeland Security, DOT, Federal Bureau of Investigation, National Motor Freight Traffic Association, and the Society of Automotive Engineers.

Since its inception, the Task Force, in concert with other TMC task forces and committees, has developed multiple recommended practices (RPs) related to cybersecurity efforts. For example, the task force produced an RP titled *Cybersecurity Insurance Guidelines* that offers guidelines for cybersecurity awareness, prevention, and risk mitigation through insurance for commercial motor vehicles weighing more than 10,001 pounds. The guidelines also list resources that fleet managers can use for managing cybersecurity risk. TMC continues to raise awareness of the importance of cybersecurity among fleet managers and service technicians by incorporating efforts into its annual National Technician Skills Competition which is designed to challenge top industry technicians’ knowledge and awareness of

²² <https://www.trucking.org/fleet-cywatch>.

²³ <https://automotiveisac.com/best-practices/>.

critical issues that these frontline personnel can positively impact through maintenance operations.²⁴ TMC’s cybersecurity efforts will play an integral part in highway safety today and into the future.

In addition to these steps, ATA’s leadership has also implemented a monthly dialogue with the Transportation Security Administration (TSA) to share information and resources and discuss the protocols and standards being developed to improve cybersecurity. TSA has expressed a willingness to collaborate with, and even train, ATA staff and the trucking industry on cybersecurity best practices. The trucking industry and government working hand-in-hand to address and prevent potential threats is a significant step towards enhancing cybersecurity efforts.

These actions show just how serious the trucking industry is taking the potential threat of cyberattacks, as well as the significant steps that we are taking to mitigate and prevent these risks. As the shift to autonomy continues, the trucking industry will remain ever vigilant of cybersecurity risks and threats.

- **AUTOMATED DRIVING TECHNOLOGY SUPPORTS THE TRUCKING WORKFORCE:**

The trucking industry, the backbone of our nation’s economy and supply chain, continues to face a significant driver shortage. In 2022, the shortage of qualified drivers was at a near-record level of 78,000.²⁵ Recent events have not helped; the closure of a large, less-than-truckload motor carrier contributed significantly to the decreased employment of 37,000 in the truck transportation sector.²⁶ Many who lost jobs due to this closure will find jobs with new employers due to the demand for their skills. However, in the near term, this closure will exacerbate the shortage. Even before this closure, we projected that the shortage would increase to 160,000 by 2031.²⁷ Furthermore, the trucking industry must hire roughly 1.2 million new drivers over the next decade to both keep pace with growing demand and replenish an aging workforce.²⁸ Our nation needs drivers, and we need them yesterday.

Technologies that empower drivers to be more productive help alleviate the driver shortage. Contrary to the unfounded alarmist fears propagated by some opposing interest groups, these technological advances will enhance safety and improve drivers’ lives. Improving drivers’ lives makes the occupation more desirable, enabling more drivers to stay in the industry and attracting new drivers.

A current debate in the California legislature is the result of some pushing the notion that autonomous vehicles will result in fewer jobs and less safety.²⁹ Labor leaders are attempting to pass legislation that

²⁴ <https://tmc.trucking.org/TMC-Fall-Meeting>.

²⁵ *ATA Driver Shortage Update 2022*. American Trucking Associations, October 25, 2022. Available online at: https://ata.msgfocus.com/files/amf_highroad_solution/project_2358/ATA_Driver_Shortage_Report_2022_Executive_Summary.October22.pdf (accessed September 1, 2023).

²⁶ “Transportation and warehousing lost 34,000 jobs in August. Employment in truck transportation fell sharply (-37,000), largely reflecting a business closure. Couriers and messengers lost 9,000 jobs, while air transportation added 3,000 jobs. Employment in transportation and warehousing had shown little net change over the prior 12 months.” *Employment Situation Summary, August 2023*, U.S. Department of Labor, Bureau of Labor Statistics, September 1, 2023. Available online at: <https://www.bls.gov/news.release/empsit.nr0.htm> (accessed September 1, 2023).

²⁷ *ATA Driver Shortage Update 2022*.

²⁸ *Ibid.*

²⁹ Sean M. O’Brien, the Teamsters general president recently stated, “the Newsom administration is catering to Big Tech when it should be protecting good-paying jobs and keeping Californians safe from roadside tragedy.” *TEAMSTERS CALL ON GOV. NEWSOM TO PUT SAFETY BEFORE BIG TECH BY SUPPORTING AB 316*, Teamsters.org, August 29, 2023.

would ban autonomous trucks over 10,000 lbs in that state.³⁰ Governor Newsom’s administration is wisely pushing back to prevent damage to the state’s culture of innovation while ensuring state agencies can perform their duties of protecting public safety.³¹

Fears that all commercial driving jobs will be eliminated and that individuals will be left out of work are overblown and unsubstantiated.³² If a future exists in which these jobs are all handled by autonomous vehicles, it is too far away to see. As mentioned earlier in my testimony, a recent 2021 DOT study showed that the adoption of automation in long haul trucking would not only increase earnings across all workers and increase the US GDP but would also increase employment.³³ Today, the issue is increasing all levels of automated technology to improve safety and productivity. To increase the availability and accessibility of such technology, testing must be undertaken safely and responsibly. Policymakers should not ignore the positive impact it will have on workers and society by reflexively banning the testing and implementation of technology because, at some point in the distant future, it could change the nature of work for some individuals.

As technology increases productivity, this may mean that fewer individuals are needed to perform the same work. While ATA believes that the increase in productivity provided by automated trucks will help address the driver shortage in the face of increasing demand for freight transportation by truck,³⁴ we do not dismiss the importance of considering the potential impacts on the workforce and the need to develop programs that will help prepare workers with the skills needed for the jobs of the future.

The integration of automated driving systems in trucking could lower freight transportation costs and enhance productivity, leading to greater economic activity and job creation in the transportation and

Available online at: <https://teamster.org/2023/08/teamsters-call-on-gov-newsom-to-put-safety-before-big-tech-by-supporting-autonomous-vehicle-bill-ab-316/> (accessed September 1, 2023).

³⁰ “The Teamsters Union and the California Labor Federation are sponsoring legislation to require a human operator on driverless big rigs to ensure safety and prevent job loss.” *California Labor Opposes Expansion of Driverless Vehicles*, California Labor Federation, August 11, 2022. Available online at: <https://calaborfed.org/letter-to-california-puc-re-autonomous-vehicles/> (accessed September 1, 2023).

³¹ “Since 2012, California has undergone a long and thoughtful regulatory process to permit autonomous passenger vehicles and other light-duty vehicles, and the state is currently developing its permitting framework for autonomous heavy-duty trucks. Despite this history of careful and fact-based public policy, AB 316 circumvents the process and effectively bans heavy duty autonomous trucks without safety drivers in California. And it runs counter to our state’s business climate, where thoughtful policy, innovative ideas and an inclusive culture combine to fuel the creation of new industries, while protecting public safety.” Letter from Dee Dee Myers, Senior Advisor to the Governor and Director, Governor’s Office of Business and Economic Development, to Assemblymember Cecilia Aguiar-Curry, August 15, 2023. Available online at: <https://www.politico.com/f/?id=0000018a-1e52-d2a3-a3fe-ffffaa3a20000> (accessed September 1, 2023).

³² “Our model indicates that the adoption of driving automation will bring direct productivity enhancements to the long-haul trucking sector and (due to transportation’s central role in the economy) produce secondary productivity enhancements to the larger macroeconomy. These productivity enhancements will increase GDP, capital, employment, wages, and welfare that can be monetized into billions of dollars. Additionally, our model concluded that these economic benefits can likely be reaped without mass lay-offs of long-haul truck drivers.” Waschik, Robert *et al.*, *Macroeconomic Impacts of Automated Driving Systems in Long-Haul Trucking*, U.S. Department of Transportation, Office of the Assistant Secretary for Research and Technology, Intelligent Transportation Systems Joint Program Office, 2021, at p. 35. Available online at: <https://rosap.ntl.bts.gov/view/dot/54596> (accessed September 1, 2023). *See also*, *Autonomous long-haul trucking stands to grow the Golden State’s economy while creating jobs and raising wages without mass driver layoffs*, Silicon Valley Leadership Group Foundation, April 13, 2022. Available online at: <https://www.svl.org/study-shows-autonomous-trucking-will-grow-californias-economy/> (accessed September 1, 2023).

³³ <https://rosap.ntl.bts.gov/view/dot/54596>

³⁴ Freight Transportation Forecast 2020 to 2031, American Trucking Associations, 2020.

logistics industries as well as other business sectors.³⁵ This would require some individuals to acquire new skills, and provides an opportunity for Congress to support the industry as we embrace these innovations. Ensuring that job training programs and federal workforce development dollars are targeted to support our workers as they adjust to a changing workplace will help prepare workers with the new and marketable skills needed for the jobs of the future.

The trucking industry's best asset is our incredible workforce. ATA is committed to developing that workforce, bringing unique individuals into great family-sustaining careers³⁶, and helping existing individuals in the industry gain and increase the skills they need to succeed. As the U.S. unemployment rate is near historic lows,³⁷ we know that our industry must be employers of choice to recruit the next generation. To that end, the industry is focused on bettering the lives of its workforce. Technology has a substantial role to play here, and our industry is moving ahead to enhance safety and productivity, leading to benefits for all.

- **AUTOMATED DRIVING TECHNOLOGY & THE SUPPLY CHAIN/GLOBAL COMPETITIVENESS:**

ATA encourages Congress and federal agencies to develop policies that will foster innovation and ensure that America does not fall behind its global competitors in the development of this important technology. AVs and ADS deployment have the potential to significantly enhance the safety, efficiency, and productivity of the U.S. freight and logistics systems. We have an opportunity to ensure that the technologies and vehicles that generate those benefits are developed, improved, implemented, and sold around the world by American companies.

Core technologies that will drive autonomous vehicle development and deployment – LIDAR (light detection and ranging), programming, machine learning, and artificial intelligence – should be emphasized by federal agencies so that America leads in the development of connected and automated heavy-duty trucking technology. As noted by the Congressional Research Service in a 2021 report, the pace of commercialization for autonomous technologies has slowed in reaction to accidents involving autonomous technology in passenger vehicles, but this has not stopped the accelerating development of advanced technologies that will improve vehicle performance, efficiency, and safety.³⁸ Establishing a

³⁵ “New jobs will be created. Driving automation systems would be expected to lower freight transportation costs and enhance productivity, leading to greater economic activity and job creation in the transportation and logistics industries, and other business sectors. Just as many employees today work in occupations that were unknown to prior generations—such as unmanned aerial systems, vehicle cybersecurity, or micromobility—future workers may choose from a wider variety of jobs that emerge from technology improvements, including driving automation.” *Driving Automation Systems in Long-Haul Trucking and Bus Transit: Preliminary Analysis of Potential Workforce Impacts*, DOT Report to Congress, January 2021, page 10. Available online at: <https://www.transportation.gov/sites/dot.gov/files/2021-01/Driving%20Automation%20Systems%20in%20Long%20Haul%20Trucking%20and%20Bus%20Transit%20Preliminary%20Analysis%20of%20Potential%20Workforce%20Impacts.pdf> (accessed September 7, 2023).

³⁶ According to ATA's 2021 industry survey, the median pay for a truckload driver is \$69,687 per year, not including benefits. This represents an 18% increase from 2019. *2022 ATA Driver Compensation Study Advanced Executive Summary*. American Trucking Associations, June 30, 2022. Available online at: https://ata.msgfoc.us/files/amf_highroad_solution/project_2358/ATA_2022_Driver_Compensation_Study_-_Press_Executive_Summary.pdf (accessed September 1, 2023).

³⁷ The current U.S. unemployment rate as reported by the U.S. Department of Labor's Bureau of Labor Statistics is 3.8 percent. *Employment Situation Summary, August 2023*.

³⁸ Congressional Research Service. Report R45985, “Issues in Autonomous Vehicle Testing and Deployment.” 23 April 2021. <https://crsreports.congress.gov/product/pdf/R/R45985>.

federal framework for testing and deployment of vehicles with advanced sensors, machine learning algorithms, and real-time data processing capabilities will ensure that we do not fall behind and forfeit our global dominance in innovation. It is also important to remember that autonomous vehicles and these core technologies can also be used to support military applications, protecting our service men and women on the job while they protect our country.³⁹

As local, state, and federal agencies seek to achieve policy goals such as reducing emissions and strengthening supply chain resilience, we are also seeing a need for increased investment in autonomous technologies to support these goals. New zero-emission yard tractors at a terminal at the Port of Long Beach in California, which will be required to be operated by humans, will operate alongside over 100 automated vehicles and 70 driverless container-stacking cranes at the most automated port terminal in the U.S.⁴⁰ However, these investments in automation are lamentably rare in the U.S. where only four of 360 commercial ports have at least semi-automated terminals,⁴¹ and those terminals still rank relatively low for efficiency among their global peers according to the 2023 Container Port Performance Index.⁴² We all saw firsthand as we emerged from the pandemic that less efficient cargo handling at ports led to idling trucks outside of marine port terminals, delayed deliveries of goods, and empty store shelves. With those impacts in mind, it is important for Congress to step in and lay out a framework that will enable the testing and deployment of autonomous vehicles where appropriate to increase our supply chain efficiency and resilience.

Technologies in development here in the U.S. can be adapted and deployed to ensure the safe operation of new, clean trucks with tangible benefits to safety and the environment. Autonomous trucks can ensure the continuous flow of goods by leveraging real time data and the potential 24/7 availability for equipment. Additional benefits can be found in minimizing the energy consumption of heavy-duty trucks and trailers through platooning, route optimization that minimizes idling time in traffic jams or at facilities to load and unload cargo, and split-second responsiveness in real-time traffic conditions. These are technologies that should be explored with a mind towards improving the safety and traveling experience of all road users, making supply chains more efficient and reducing the environmental footprint of freight transportation.

The United States has a unique opportunity to establish itself as a global leader in AV technology, leveraging its technological prowess, research capabilities, and skilled workforce. ATA looks forward to working with congressional leaders, federal agencies, and industry stakeholders to ensure that, as AVs become an integral part of the transportation landscape, they not only drive economic growth but also contribute to a more sustainable and resilient future.

³⁹ *Autonomous Vehicles: New Technology Revolutionizes Army's Principles of Sustainment*, August 31, 2022. Available at: https://www.army.mil/article/259621/autonomous_vehicles_new_technology_revolutionizes_armys_principles_of_sustainment (accessed September 7, 2023)

⁴⁰ Reuters. "Focus: Jobs at stake as California port terminal upgrades to green technology." Lisa Baertlein, 8 June 2023. <https://www.reuters.com/sustainability/jobs-stake-california-port-terminal-upgrades-green-technology-2023-06-08/>.

⁴¹ APM Research Lab, "Why does the U.S. lag other nations so badly in the automation of its ports? (And is that good or bad?)." Emily Schmidt, 3 November 2022. <https://www.apmresearchlab.org/10x-port-automation>.

⁴² World Bank Group, Transport Global Practice. "The Container Port Performance Index 2021." 24 May 2022. <https://thedocs.worldbank.org/en/doc/66e3aa5c3be4647add01845ce353992-0190062022/original/Container-Port-Performance-Index-2021.pdf>

- **THE NEED FOR A FEDERAL FRAMEWORK:**

While DOT continues its work to establish a regulatory framework to support the testing and deployment of automated commercial and passenger vehicles on U.S. roadways, it is important that Congress support these efforts or, at a minimum, not harm or impair the industry’s ongoing efforts to advance AV technology and our continued work and collaboration in the regulatory arena. A clear path to deployment will provide the certainty needed for all stakeholders to continue their efforts to bring the benefits of automated vehicles to the U.S. transportation and logistics systems. As Congress considers legislative action to support automated vehicle technology, ATA encourages Congress to adopt a multi-modal approach and prioritize commercial motor vehicles, heavy specialty vehicles, trailer-combination vehicles, and passenger vehicles equally. We strongly recommend that any legislation establishing federal oversight of the development and deployment of AV technologies consider *all road users*, including passenger vehicles, commercial trucks, and commercial buses, as well as surrounding infrastructure. Doing so will provide all road users a seat at the table to ensure that the development of AV technologies is done safely. To that end, ATA offers the following guiding principles to promote the expeditious and safe deployment of AV trucks in the U.S.:

1. **The federal government should take a leading role in setting policies that will help foster the nationwide deployment of AV technologies in trucking.** The trucking industry relies on interstate highways to facilitate the free flow of goods between states. Accordingly, it is important that state and local laws do not inadvertently create disparities that slow the adoption of these safety- and productivity-boosting technologies. A clear process and standards-setting role for the federal government that preempts state efforts to regulate vehicle design is critical for commercial AV development.
2. **The federal government’s approach should follow technological maturity and industry best practices.** AV technology in trucking is developing rapidly—and demonstrations continue to show the promise of enhanced safety and efficiency benefits. Congress and DOT should work with ATA, including ATA’s Technology & Maintenance Council, and other trucking industry representatives to incorporate industry best practices when developing guidance and regulations for ADS-equipped commercial motor vehicles. Industry best practices provide a vital technical basis to assist the evolution of legislative and/or regulatory frameworks.
3. **The federal government should collaborate with industry to create performance-based standards that focus on objective testing and evaluation criteria for autonomous vehicles.** Requiring AVs to achieve an acceptable level of safety and performance, rather than requiring the use of specific technology, will focus regulations on risk management within specific operating environments. Government-industry interactions through the Voluntary Safety Self-Assessment (VSSA) process, the AV TEST Initiative, and the anticipated AV STEP program provide DOT with information on a variety of approaches to ADS technology and operations from a cross-section of organizations testing ADS-equipped vehicles. This information will help DOT, Congress, and other agencies develop policies, regulations, and/or guidance without inadvertently picking technological or operational winners or losers.

In the absence of a federal legislative framework, regulatory efforts related to AV technologies must ensure that they do not stymie meaningful progress in development, testing, and deployment. Should Congress choose to pass legislation, we recommend that those efforts do not hinder private sector innovation.

- **CONCLUSION:**

In closing, I am grateful for the opportunity to testify before the Highways and Transit Subcommittee today on behalf of the American Trucking Associations and the motor carriers, suppliers, developers, and approximately 8.4 million men and women in trucking-related jobs that ATA represents. AV technology offers the trucking industry boundless potential for improvements to road safety, improvements to workforce recruitment and retention, reductions in congestion and emissions, and advancements in productivity. Deployment and adoption of these technologies will serve to strengthen supply chains and ensure the U.S. remains a global leader in technology and innovation.

While some have raised concern about the impacts that automated vehicle technologies will have on the future of work for truck drivers, I would reemphasize that our drivers are the trucking industry's best and most cherished asset. As we recognize and celebrate National Truck Driver Appreciation Week this week, we should consider how automated vehicle technologies can improve safety, operations, and productivity for those amazing men and women who will continue to play a critical and necessary role in our supply chain.

As the Transportation & Infrastructure Committee and Congress consider and debate a legislative federal framework for the development and deployment of automated vehicle technologies, those efforts should take a multi-modal approach to include all road users - both passenger as well as commercial motor vehicles - and the supporting infrastructure. Congress should evaluate the benefits of connected and automated technology on public safety and the economy and review regulations to take advantage of the capabilities provided by these new innovations. Implementing a seamless set of guidelines and safety standards nationwide will minimize any disruption and support the development of exciting and beneficial new technologies.

As the COVID-19 pandemic and supply chain challenges of recent years reminded the nation, trucking plays the most critical role in our economy. It keeps the shelves of our local supermarkets fully stocked, gets life-saving medical supplies to hospitals and clinics, and delivers goods at every stage of production to communities across our country. The trucking industry should not be left out of any legislation that supports innovation in automated vehicle technology.

As you endeavor in these efforts, I, and the members of the American Trucking Associations, stand ready to support and work hand-in-hand with you. Thank you again, Chairman Crawford, Ranking Member Holmes Norton, and Members of this distinguished Subcommittee. I appreciate the opportunity and look forward to your questions.