

Robyn Boerstling

*Vice President
Infrastructure, Innovation and Human Resources Policy*

February 11, 2020

The Honorable Frank Pallone
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

The Honorable Greg Walden
Ranking Member
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

The Honorable Jan Schakowsky
Chair
Subcommittee on Consumer Protection
and Commerce
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

The Honorable Cathy McMorris Rodgers
Ranking Member
Subcommittee on Consumer Protection
and Commerce
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Pallone, Chair Schakowsky, Ranking Member Walden and Ranking Member McMorris Rodgers:

The National Association of Manufacturers welcomes the Committee's attention to the topic of autonomous vehicles with the Subcommittee on Consumer Protection and Commerce hearing on "Autonomous Vehicles: Promises and Challenges of Evolving Automotive Technologies," and we appreciate the opportunity to share our perspective on this important issue.

The NAM is the largest manufacturing association in the United States representing manufacturers in every industrial sector and in all 50 states. Manufacturing employs more than 12.8 million men and women, contributes nearly \$2.4 trillion to the U.S. economy annually, has the largest economic impact of any major sector and accounts for 63 percent of all private-sector research and development in the nation.¹ The NAM is the powerful voice of the manufacturing community and the leading advocate for a policy agenda that helps manufacturers compete in the global economy and create jobs across the United States.

The NAM represents all parts of the passenger and commercial AV supply chain, including original equipment manufacturers, suppliers, and entities involved in the design, testing and manufacturing of Automated Driving Systems, as well as commercial vehicle and multimodal transportation manufacturers and suppliers. The NAM also represents manufacturers who rely on advanced transportation technology to better serve their customers and communities.

As automotive technologies continue to advance, manufacturers in the United States continue to take the lead in designing and making products that improve safety and enhance the driving experience. Manufacturers have been early innovators of the technologies and products found in ADS

¹ <https://www.nam.org/facts-about-manufacturing/>

and are building on long-standing research, knowledge and success to advance the safe, timely and widespread deployment of autonomous vehicles.

The NAM believes vehicles equipped with well-tested and proven AV technologies will present a new opportunity to make our roadways safer. According to National Highway Traffic Safety Administration (NHTSA) data, human error was the critical cause in 94 percent of vehicle crashes.² Safety continues to be a primary objective for manufacturers at every stage of the process to design, build, test, operate and deploy autonomous vehicles. Manufacturers appreciate that Congress and the Department of Transportation have recognized the safety improvement potential presented by AV technologies and the need to address barriers for innovation and adoption of these technologies to realize those safety benefits.

The NAM continues to call for ongoing collaboration between industry and government to develop a voluntary, evolving framework that fosters further innovation in autonomous vehicle technology by manufacturers in America. As the NAM's *Building to Win* infrastructure blueprint states:

This is an exciting time for automotive and truck manufacturers as well as suppliers, but to maintain a mantle of leadership, our nation's elected officials and leaders must get safety regulations and the adoption of new technologies right... Also, a federal regulatory approach that considers the industry a technology partner and allows for innovation will be instrumental to the further success of automated driving systems (ADS).³

The NAM supports the ongoing work by DOT to develop a framework to promote progress on AV deployment and has communicated that manufacturers hope to see further progress on broad regulatory changes in the attached comments. At the same time, we urge Congress to recognize that federal legislation is needed to fully advance these objectives. The NAM appreciates this Committee's leadership in the bipartisan, bicameral process to develop AV legislation. As these efforts progress, DOT's AV 3.0 and AV 4.0 automation principles, which include prioritizing safety, a commitment to remaining technology neutral, modernizing regulations and promoting a consistent regulatory and operational environment, should guide Congress as it sets out AV policy.

Federal legislation is necessary to clarify the role of the federal and state governments in the advancement of AV innovation. The NAM has long supported an approach in which the vehicle and roadway safety experts at DOT lead the policy development for furthering automated technology for all types of motor vehicles on our nation's roadways. The growth of AV technology and the accompanying advancement of AV safety goals can best be accomplished through a government-stakeholder partnership that provides a clear federal framework for the testing and deployment of AVs and flexibility for industry in the technical development and design of the technology. Federal policy should prevent a patchwork of conflicting state requirements that can create regulatory uncertainty and delay the deployment of AV technologies. Federal legislation can also modernize and speed the regulatory process, and it should advance a technology-neutral approach that promotes competition and aids innovation for manufacturers developing new products and future technologies.

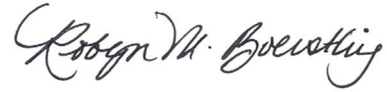
Transformational automotive technologies are advancing around the world, and the United States must create an environment that fosters safe and timely adoption of AV technologies to retain industry leadership and maintain global competitiveness. As this Committee develops legislation to support the future of transportation, we encourage the Committee to continue to engage with stakeholders to ensure that emerging solutions work for those creating, manufacturing and investing in

² <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812506>

³ https://www.nam.org/wp-content/uploads/2019/05/IIHR.BTW_2019.v08.pdf

AV technologies. The NAM appreciates the leadership of the Committee on AV policy and the opportunity to share our key priorities on this important issue.

Sincerely,

A handwritten signature in black ink, reading "Robyn M. Goewelt". The signature is written in a cursive style with a large, looping initial "R".

Enclosures: 3

Stephanie Hall
Director
Innovation Policy

August 27, 2019

Docket Management Facility
U.S. Department of Transportation
1200 New Jersey Avenue, SE
West Building, Ground Floor, Room W12-140
Washington, DC 20590-0001

**Re: Removing Regulatory Barriers for Vehicles With Automated Driving Systems
(Docket No. NHTSA-2019-0036)**

On behalf of the 14,000 members of the National Association of Manufacturers (NAM), the largest manufacturing association in the United States representing manufacturers in every industrial sector and in all 50 states, the NAM submits these comments in response to the National Highway Traffic Safety Administration's advance notice of proposed rulemaking (ANPRM) on Removing Regulatory Barriers for Vehicles With Automated Driving Systems.

Manufacturing employs more than 12 million men and women, contributes over \$2 trillion to the U.S. economy annually, has the largest economic multiplier of any major sector and accounts for more than three-quarters of all private-sector research and development in the nation. The NAM is the powerful voice of the manufacturing community and the leading advocate for a policy agenda that helps manufacturers compete in the global economy and create jobs across the United States.

As automotive technologies continue to advance, manufacturers in the United States continue to take the lead in designing and making products that improve safety and enhance the driving experience. Manufacturers have been early innovators of the technologies and products found in Automated Driving Systems and are building on long-standing research, knowledge and success to advance the safe, timely and widespread deployment of autonomous vehicles. The NAM represents all parts of the passenger and commercial AV supply chain, including original equipment manufacturers, suppliers, and entities involved in the design, testing and manufacturing of ADS, as well as commercial vehicle and multimodal transportation manufacturers and suppliers. The NAM also represents manufacturers who rely on advanced transportation technology to better serve their customers and communities.

The NAM believes vehicles equipped with well-tested and proven ADS will present a new opportunity to make our roadways safer. According to NHTSA data released last year, human error remains the critical cause of 94 percent of vehicle crashes.¹ At every stage of the process, safety continues to be a primary objective for manufacturers that are designing, building, testing, operating and deploying autonomous vehicles. Manufacturers appreciate that NHTSA recognizes the safety improvement potential presented by ADS technologies, and the

¹ <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812506>

need to address barriers for innovation and adoption of these technologies to realize those safety benefits.

The NAM welcomes the opportunity to comment on this ANPRM intended to remove regulatory barriers that would prevent the timely deployment of AVs. The NAM submitted comments in 2016 to the *Federal Automated Vehicle Policy* and in 2017 to *Automated Driving Systems: A Vision for Safety*, as well as in 2018 to the Department of Transportation's request for comment on *Preparing for the Future of Transportation: Automated Vehicles 3.0 (AV 3.0)*. At each stage, the NAM continues to call for ongoing collaboration between industry and government to develop a voluntary, evolving framework that fosters further innovation in autonomous vehicle technology by manufacturers in America. As the NAM's *Building to Win* infrastructure blueprint states:

This is an exciting time for automotive and truck manufacturers as well as suppliers, but to maintain a mantle of leadership, our nation's elected officials and leaders must get safety regulations and the adoption of new technologies right... Also, a federal regulatory approach that considers the industry a technology partner and allows for innovation will be instrumental to the further success of (ADS).²

The NAM has consistently called for guidance that is voluntary and provides flexibility for manufacturers to continue to innovate in ADS and reiterates here its support for that approach taken by DOT with AV 3.0. The NAM further supports the DOT's automation principles outlined in AV 3.0, which include prioritizing safety, committing to remaining technology neutral, modernizing regulations and promoting a consistent regulatory and operational environment. These principles should guide NHTSA's approach in this ANPRM to addressing compliance verification challenges that exist for crash avoidance standards contained in the Federal Motor Vehicle Safety Standards specific to the unique questions presented by ADS technologies.

The NAM supports an approach to solving compliance verification challenges with AVs that provides manufacturers with maximum flexibility to adapt technology and innovate in a quickly evolving and competitive area. In this ANPRM, NHTSA provides six possible approaches to revising crash avoidance test procedures, specifically for ADS vehicles that lack manual controls. Manufacturers support an approach that would permit these various safety testing procedures, or additional new procedures if a more suitable alternative emerges. Keeping the door open to multiple testing procedures both promotes competition and aids innovation for manufacturers developing new products and future technologies in AVs. The growth of AV technology and the accompanying advancement of AV safety goals can best be accomplished through a government-stakeholder partnership that provides a clear federal framework for the testing and deployment of AVs and flexibility for industry in the technical development and design of the technology.

Transformational automotive technologies are advancing around the world, and the United States has an opportunity to lead and maintain global competitiveness by creating an environment that fosters safe and timely adoption of ADS technologies. DOT, NHTSA and the Department's key modal agencies should continue to consider broad regulatory changes necessary to foster the growth of AVs, working with stakeholders to ensure that emerging solutions work for those creating, manufacturing and investing in AV technologies. The NAM remains committed to working with DOT and NHTSA to accomplish these shared goals.

² https://www.nam.org/wp-content/uploads/2019/05/IIHR.BTW_2019.v08.pdf

Comments submitted electronically by:

Stephanie Hall
Director of Innovation Policy
National Association of Manufacturers
733 10th Street NW, Suite 700
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Catie Kawchak
Director
Infrastructure Policy

August 26, 2019

Docket Management Facility
U.S. Department of Transportation
1200 New Jersey Avenue, SE
West Building, Ground Floor, Room W-12-140
Washington, DC 20590-0001

Re: Safe Integration of Automated Driving Systems-Equipped Commercial Motor Vehicles (Docket No. FMCSA-2018-0037)

On behalf of the 14,000 members of the National Association of Manufacturers, the largest manufacturing association in the United States representing manufacturers in every industrial sector and in all 50 states, the NAM submits these comments in response to the Federal Motor Carrier Safety Administration's advanced notice of proposed rulemaking regarding the safe integration of automated driving systems-equipped commercial motor vehicles on our Nation's roadways.

Manufacturing employs more than 12.8 million men and women, contributes \$2.38 trillion to the U.S. economy annually, has the largest economic multiplier of any major sector and accounts for more than three-quarters of private-sector research and development. The NAM is the powerful voice of the manufacturing community and the leading advocate for a policy agenda that helps manufacturers compete in the global economy and create jobs across the United States.

As automotive technologies continue to advance, manufacturers in the United States continue to take the lead in designing and making products that improve safety and enhance the driving experience. Manufacturers have been early innovators of the technologies and products found in Automated Driving Systems and are building on long-standing research, knowledge and success to advance the safe, timely and widespread deployment of autonomous vehicles.

The NAM represents all parts of the passenger and commercial vehicle AV supply chain, including original equipment manufacturers, suppliers, and entities involved in the design, testing and manufacturing of ADS, as well as multimodal transportation manufacturers and suppliers developing automated technologies to improve all types of freight movements. The NAM also represents manufacturers who rely on advanced transportation technology to better serve their customers and communities.

According to National Highway Traffic Safety Administration (NHTSA), human error remains the critical cause of 94 percent of vehicle crashes. As the NAM's *Building to Win* infrastructure blueprint states:

This is an exciting time for automotive and truck manufacturers as well as suppliers, but to maintain a mantle of leadership, our nation's elected officials and leaders must get safety regulations and the adoption of new technologies right... Also, a federal

regulatory approach that considers the industry a technology partner and allows for innovation will be instrumental to the further success of (ADS).ⁱ

The NAM believes commercial motor vehicles that will be equipped with well-tested and proven ADS will present a new opportunity to make our roadways safer. At every stage of the process, safety continues to be the primary objective for manufacturers that are designing, building, testing, operating and deploying autonomous vehicles. The NAM agrees with the Department of Transportation's AV 3.0 estimation that the best way to achieve the Federal Motor Carrier Safety Administration's (FMCSA) goal to enhance safety is to create a regulatory environment that encourages the safe acceleration and adoption of ADS in CMVs.

The NAM applauds the DOT and FMCSA for their flexible regulatory approach to AV technology as it applies to passenger and commercial motor vehicles because the evolving transportation landscape requires an ongoing modernization of regulatory policies. We encourage DOT to expand the process of reviewing antiquated policies to make the application of ADS consistent with other modes of transportation, such as rail. The NAM submitted comments in 2018 to "*Preparing for the Future of Transportation: Automated Vehicles 3.0*" (AV 3.0) and highlighted the need for ongoing collaboration with all transportation and manufacturing stakeholders to develop a voluntary, evolving framework that fostered further innovation in autonomous vehicle technology.

In addition to a focus on safety, FMCSA must advance a regulatory policy that allows for autonomous technology to deliver increasing gains in freight efficiency and mobility. Ongoing innovation requires continued flexibility and a federal framework that is focused on long-term progress and prepared for ongoing technology evolutions that can rapidly change. In AV 3.0, FMCSA correctly decided to "no longer assume that the CMV driver is always a human or that a human is necessarily present onboard a commercial vehicle during its operation." Manufacturers encourage FMCSA to further explain this future-forward approach in its Notice for Proposed Rulemaking and analyze future implications of that assumption regarding drivers so that manufacturers and suppliers can appropriately prepare products for the market.

Further, as technology advances specifically around deployment of more advanced AV systems, FMCSA will likely need to modify policies surrounding certifications and training for commercial drivers, new digital identification, hours of service or other factors outlined in the ANPRM. However, it is important that any modification to FMCSA's current regulations be technology neutral. FMCSA must avoid technology mandates that stifle innovation, limit competition or disrupt supply chains by picking winners and losers.

In support of interstate commerce, the Department of Transportation must continue to lead the development of safety-oriented policy to govern the continued introduction of AV technology. The FMCSA has a clear responsibility to regulate commercial motor vehicle safety and to assert federal leadership in order to avoid regulatory uncertainty and prevent the deleterious impacts of a 50-state patchwork. The NAM strongly supports the pre-emptive authority that FMCSA reiterated in its AV 3.0 framework.

Transformational automotive technologies are advancing around the world, and the United States has an opportunity to lead and maintain global competitiveness by creating an environment that fosters safe and timely adoption of ADS in commercial motor vehicles. DOT and FMCSA should continue to lead the regulatory promulgation with the input of all necessary stakeholders to support the many benefits of AV technologies. The NAM appreciates FMCSA's

consideration of these comments on behalf of manufacturers and remains committed to working with the FMCSA to accomplish this shared goal.

Comments Submitted by:

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ⁱ https://www.nam.org/wp-content/uploads/2019/05/IIHR.BTW_.2019.v08.pdf

Stephanie Hall

Director

Innovation Policy

December 3, 2018

U.S. Department of Transportation
1200 New Jersey Avenue, SE
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Washington, DC 20590-0001

**RE: Preparing for the Future of Transportation: Automated Vehicles 3.0 (AV 3.0)
(Docket No. DOT-OST-2018-0149)**

On behalf of the 14,000 members of the National Association of Manufacturers (NAM), the largest manufacturing association in the United States representing manufacturers in every industrial sector and in all 50 states, the NAM submits these comments in response to the Department of Transportation's (DOT) request for comment on *Preparing for the Future of Transportation: Automated Vehicles 3.0 (AV 3.0)*.

Manufacturing employs more than 12 million men and women, contributes over \$2 trillion to the U.S. economy annually, has the largest economic impact of any major sector and accounts for more than three-quarters of all private-sector research and development in the nation. The NAM is the powerful voice of the manufacturing community and the leading advocate for a policy agenda that helps manufacturers compete in the global economy and create jobs across the United States.

Manufacturers are leading innovators, designing and producing products that improve the lives of customers and using technologies that transform manufacturing processes. Manufacturers were early innovators of the technologies and products in Automated Driving Systems (ADS) and are poised to continue to lead in the safe, timely and widespread deployment of autonomous vehicles (AVs). The NAM represents all parts of the AV supply chain, including original equipment manufacturers, suppliers, and entities involved in the design, testing and manufacturing of ADS, as well as commercial vehicle and multimodal transportation manufacturers and suppliers. The NAM also represents manufacturers who rely on advanced transportation technology to better serve their customers and communities. The NAM welcomes the opportunity to comment on DOT's updated approach to ADS in *AV 3.0*.

AV technology presents an opportunity to make our roadways safer. According to National Highway Traffic Safety Administration (NHTSA) data released this year, human error was the critical cause in 94 percent of vehicle crashes.¹ Safety continues to be a primary objective for manufacturers at every stage of the process to design, build, test, operate and deploy autonomous vehicles.

The NAM submitted comments on the *Federal Automated Vehicle Policy* (the "Policy") released in 2016 and *Automated Driving Systems: A Vision for Safety* (the "Guidance") in 2017. In both

¹ <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812506>

cases, we noted our appreciation for NHTSA's outreach to industry and highlighted the need for ongoing collaboration to develop a voluntary, evolving framework that fostered further innovation in autonomous vehicle technology by manufacturers in America. The NAM appreciates DOT's continued outreach to manufacturers and that *AV 3.0* represents a continuation of the approach taken in the prior frameworks while also incorporating additional stakeholder feedback.

The NAM has consistently called for guidance that is voluntary and provides flexibility for manufacturers to continue to innovate in ADS. *AV 3.0* builds upon the voluntary guidance provided in 2017. The NAM appreciates that DOT continues to emphasize the voluntary nature of developers' safety self-assessments and supports the development of voluntary technical standards and approaches for AV deployment. *AV 3.0* "reaffirms DOT's reliance on a self-certification approach, rather than type approval, as the way to balance and promote safety innovation." Manufacturers prioritize safety and are committed to taking steps to build consumer confidence in the safety of AV technology. At this point in time, advancing AV safety goals can be best accomplished through a government-stakeholder partnership that provides a clear federal framework for the testing and deployment of AVs and flexibility for industry in the technical development and design of the technology.

The NAM welcomes DOT's multimodal approach to the deployment of ADS in *AV 3.0*. The updated framework incorporates commercial vehicles and considers the authorities of the surface transportation operating administrations within DOT with jurisdictions impacted by AV technology. The NAM agrees that the best way to achieve the Federal Motor Carrier Safety Administration's (FMCSA) goal of reducing crashes involving commercial vehicles is to create a regulatory environment that speeds the development of ADS in these systems. Manufacturers look forward to participating in the subsequent development of policy and regulations by FMCSA to promote the integration of ADS-equipped commercial motor vehicles.

The NAM supports the continued approach in *AV 3.0* to the role for the federal and state governments in the advancement of AV innovation, specifically the call for states and localities to avoid unnecessary and incompatible regulations that could create hurdles for AV technologies. The NAM has long supported an approach to AVs in which the vehicle and roadway safety experts at DOT lead the policy development for this innovative technology. The federal government's approach should modernize the regulatory process and prevent a patchwork of conflicting state requirements from unnecessarily interfering with the timely deployment of AVs. The NAM supports congressional action on legislation to achieve this goal. The House of Representatives passed the SELF DRIVE ACT (H.R. 3388), introduced by Representatives Bob Latta and Jan Schakowsky, in September 2017. The AV START Act (S.1885), introduced by Senators John Thune and Gary Peters, remains pending in the Senate. These two pieces of legislation would speed the development of NHTSA safety regulations workable for AVs, provide a pathway for AV manufacturers to test the technology while regulations are updated and clarify the role of the federal and state governments to prevent a potentially conflicting and costly regulatory environment.

This transformational automotive technology is advancing around the world, and the United States has an opportunity to boost its global competitiveness by creating an environment that fosters safe and timely adoption. The NAM remains committed to working with DOT and its key modal agencies to accomplish this shared goal.

Comments submitted electronically by:

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