

**December 10, 2018**

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: Docket NHTSA-2018-0092  
Pilot Program for Collaborative Research on Motor Vehicles with High or Full Driving  
Automation**

Enclosed are the comments of the Association of Global Automakers, Inc., with regard to NHTSA's October 10, 2018, advance notice of proposed rulemaking (ANPRM) on the development of a potential pilot program for collaborative research on motor vehicles with high or full driving automation. If you have any questions on this matter, please contact me.

Sincerely,



**Paul Scullion**  
Senior Manager, Vehicle Safety and Connected Automation

Enclosure

**COMMENTS OF THE ASSOCIATION OF GLOBAL AUTOMAKERS, INC.,  
REGARDING NHTSA’S OCTOBER 10, 2018, ADVANCE NOTICE OF PROPOSED RULEMAKING  
ON THE DEVELOPMENT OF A POTENTIAL PILOT PROGRAM FOR COLLABORATIVE  
RESEARCH ON MOTOR VEHICLES WITH HIGH OR FULL DRIVING AUTOMATION**

The Association of Global Automakers, Inc., (“Global Automakers”)<sup>1</sup> appreciates the opportunity to provide comments in response to the October 10, 2018, NHTSA advance notice of proposed rulemaking (ANPRM) on the development of a potential pilot program for collaborative research on motor vehicles with high or full driving automation.

**1. Introduction**

The automotive industry is making significant investments in the testing and deployment of automated driving system (ADS) and other innovative technologies to help better protect occupants and other road users, and safety is a top priority. With rapid advances in the development of ADSs, the agency’s efforts in this area are timely, relevant, and necessary to ensure the potential life-saving benefits of this technology can be realized. There are significant opportunities to improve efficiency, provide new mobility solutions, and facilitate the effective movement of people, goods, and services, and ensure the United States maintains a leadership role in supporting the development of technology necessary for a modern, twenty-first century transportation system.

The following comments are intended to address the questions highlighted in the NHTSA ANPRM and include recommendations for how the agency should consider next steps with respect to the development of a potential pilot program.

**2. Pilot Program for the Safe Testing and Deployment of Vehicles with High and Full Driving Automation**

Global Automakers is supportive of the concept of a NHTSA Pilot Program to help further support the safe testing and deployment of automated vehicles. However, as highlighted in the agency’s notice, there are a number of questions and underlying assumptions that need to be considered to ensure the effectiveness of the program in helping achieve the benefits of automation.

**2.1. Define Objective of the Pilot**

The development of a pilot has the potential to help further the advancement of ADS in the United States. However, we believe it is important that NHTSA clearly define the goals and objectives of the

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<sup>1</sup> The Association of Global Automakers represents the U.S. operations of international motor vehicle manufacturers, original equipment suppliers, and other automotive-related trade associations. Global Automakers works with industry leaders, legislators, regulators, and other stakeholders in the United States to create public policies that improve motor vehicle safety, encourage technological innovation and addresses environmental needs. Our goal is to foster an open and competitive automotive marketplace that encourages investment, job growth, and development of vehicles that can enhance Americans’ quality of life. Our members’ account for 40 percent of all U.S. production. international automakers account for 47 percent of all U.S. sales of passenger vehicles and light trucks. For more information, visit [www.globalautomakers.org](http://www.globalautomakers.org).

program so that participants can better understand the agency’s intent with respect to engagement in the pilot. The agency’s notice does not provide a clear description of the objective of the Pilot Program and the research goals intended to be addressed.

We believe an appropriate use of NHTSA resources for a Pilot Program would be to help support testing and help inform the development of an effective structure for certification of highly automated vehicles (HAV). This structure could help inform:

- A. Public education efforts on the benefits and functionality of HAVs.
- B. Updates to existing FMVSS to allow for the certification of HAVs.
- C. The potential development of any new guidance, standards, test procedures that may be necessary to assure the safety of HAVs.

Substantial testing has been undertaken by the private sector in recent years to develop and demonstrate the safe operation of HAVs, and there is at most a limited need for NHTSA to attempt to duplicate these ongoing initiatives. Indeed, we believe the development of the Pilot Program should place no limitation on existing testing initiatives. The program should also be optional, and designed to supplement, not replace, existing regulatory structures that provide a pathway for testing or deployment. And while the agency may have concerns regarding potential participation in a voluntary program, we believe there are a number of options NHTSA could consider for incentivizing participation in a Pilot Program. Such incentives could include support through federal funding. However, there are other approaches that may be effective. These will be discussed in more detail in the sections that follow.

## **2.2. Scope of the Pilot Program**

As discussed in more detail below, we believe that given the fact that the FAST Act already allows for the on-road testing of non-FMVSS compliant vehicles by automakers (if certain conditions are met), the focus of the Pilot Program should be to (1) allow for suppliers and other entities, including technology companies and heavy duty manufacturers, to also engage in the safe testing of ADS – particularly where certain exemptions to FMVSS may be required, and (2) provide a framework that enables the safe deployment of highly automated vehicles. Safety should be the focus in developing the Pilot Program structure.

As previously discussed, we believe a primary objective of the Pilot Program should be to help inform rulemaking for HAVs with respect to existing standards. Global Automakers’ comments in response to the agency’s January 18, 2018, request for public comment on regulatory barriers in existing Federal Motor Vehicle Safety Standards (FMVSS) to the testing, compliance certification, and compliance verification of motor vehicles with automated driving systems (ADS) highlighted several key areas for the agency’s consideration. We believe addressing such barriers should remain a priority, and in addition to efforts to define the overall objectives of the pilot program, NHTSA should also seek to identify key research questions that need to be answered to inform either the development of

compliance pathways to deployment, or new standards for AVs. However, developing such additional compliance options should not be contingent upon completion of a pilot program.

### **2.3. Considerations in Designing the Pilot Program**

The ANPRM seeks comments on the potential factors that should be considered in designing the structure of the pilot program that would enable the agency to facilitate, monitor and learn from real-world testing and deployment of automated vehicles. In addition, the notice also requests input on the potential structure and challenges related to the design and implementation of such a program. In providing response to the agency's request we have developed the following general recommendations.

1. **Structure of the pilot** – It is important that the pilot program be structured in a way that ensures it can effectively be administered, while also being flexible and responsive to the rapid pace of innovation and changes in the marketplace. A potential challenge that the agency may encounter is scalability – *i.e.* how can the pilot program provide engagement opportunities for all interested stakeholders that seek to participate?

Global Automakers recommends a “distributed” pilot program structure whereby companies and/or other stakeholders can individually or collaboratively participate in the program on an *ad hoc* basis depending on the testing or deployment need. This is opposed to a more “centralized” structure, where the agency limits the program to a specific geographic region (or regions).

2. **Flexibility in defining the terms and conditions of pilot participation** – It is unlikely that a one-size-fits all approach to the Pilot Program will yield effective results in addressing the agency's current and emerging research needs. Instead, consistent with the *distributed* pilot program structure that was previously discussed, NHTSA should consider providing flexibility for entities in defining the terms and conditions associated with participation. Providing flexibility will allow stakeholders at various stages of development to evaluate systems in different regions, across a range of conditions.

In the NPRM, the agency has requested comment on how the operational design domains of individual vehicle models should be defined and reinforced, and how Federal, State and local authorities should work together to ensure they are observed. Additionally, NHTSA has also requested our views on what type and amount of data participants should be expected to share with NHTSA and/or the public for the safe testing of vehicles.

By providing flexibility, the agency would not be limiting the scope of the pilot based on pre-defined parameters, nor would it be necessarily requiring data be provided that may not be relevant to the functionality of the system being evaluated or the research question being addressed. We therefore recommend that NHTSA engage with Pilot participants on a case-by-

case basis to define (1) the conditions for testing based on the design and functionality of the ADS, (2) the potential research questions to be addressed, and (3) the data that may need to be captured and analyzed to provide further insights on those research questions. When there is agreement on the various conditions, NHTSA could then grant eligibility for participation in the program.

3. **Identify goals and objectives for each pilot participant** – By adopting a more distributed and *ad hoc* approach to the pilot, it is important that the research goals and objectives are well defined. This will help provide those seeking to participate in the pilot program with a clearer understanding of what the agency hopes to learn, which is particularly important when there may be an expectation that some level of data sharing will occur. NHTSA should consider defining some overarching research goals and objectives and the participants should work with NHTSA to determine how their participation will support NHTSA’s objectives and research goals – through data sharing.
4. **Establish clear processes for administering pilot** – The agency should have clearly defined processes for how the program is administered. This could include a description of the eligibility requirements that need to be met in order to participate in the program, a clearly defined application process, an overview of how the terms and conditions for participating in the pilot are established, and an overview of NHTSA’s review process for processing applications for onboarding pilot participants (including timeframes). This will help level set expectations and help avoid potential delay in implementing and expanding the pilot moving forward.

#### **2.4. Vehicle Design Considerations**

NHTSA seeks comment on whether there are additional areas to consider in the design of a safe Pilot Program for the testing and deployment of vehicles with high and full driving automation, including the role of various safety elements. Global Automakers believes that safety is the priority for the testing and deployment of automated vehicle systems, and it is an essential component in ensuring consumer trust.

We anticipate that as part of the Pilot Program approval process, participants may need to communicate to NHTSA the extent to which certain safety elements have been addressed within the context of a specific Pilot Program application—*e.g.*, through the submission of a Voluntary Safety Self-Assessment (VSSA). While Global Automakers believes there is significant incentive to make available information to the public with respect to the safe testing and deployment of highly automated vehicles, participation in the pilot should not be contingent upon the public availability of a VSSA.

#### **2.5. Data and Reporting**

We agree with NHTSA that a potential benefit of a pilot program would be to allow for safe on-road learning that can further support the safe deployment of ADS. It is important, however, that the agency ensure a measured approach to the type, amount, and frequency of data reporting. Any data

reporting and sharing requirements must be agreed to by both NHTSA and Pilot participants prior to the commencement of a particular Pilot project. As an overarching principle, any data sharing that is conducted within the context of the Pilot should support some stated safety need, based on the research questions and objectives agreed to by NHTSA and participants in the pilot program. The agency should again avoid a one-size-fits all approach to this issue, as imposing unnecessary or arbitrary reporting requirements could disincentivize participation and slow innovation.

Given the sensitive nature of data with respect to confidential business information, it is important that NHTSA ensure adequate cybersecurity protections are in place to protect confidential information from being compromised.

### **2.6. Confidentiality of Information Provided by Program Participants**

NHTSA is seeking information from interested parties on how it might further protect non-public information that the agency might need in connection with the pilot program. This issue is pivotal to the success of any potential Pilot, and the agency must consider how to protect proprietary confidential business information if collected as part of the program. Even if such data is aggregated, the agency could redistribute the benefits derived from one company's investment to others, which would result in discouraging further investment and/or participation in the program. Thus, it is critical that NHTSA and industry agree beforehand on the Pilot Program objectives, structure and necessary data to achieve that goal.

## **3. The use of Existing Statutory Provisions and Regulations to Support the Implementation of a Pilot Program**

The agency should consider how it could best use its available resources to facilitate on-road testing of AVs and to provide a structure for the FMVSS certification of AVs. The agency's ongoing efforts to remove regulatory barriers in the current FMVSS are a necessary first step in this process. The Pilot Program could be a useful next step in this effort and should focus on informing rulemaking activities to allow companies to certify AVs relative to existing FMVSS requirements and new AV-specific guidance, criteria, and standards that may be needed. These efforts would not only help address near-term testing concerns but would help pave the way for safe, widespread deployment. To facilitate Pilot Program testing, the agency should consider regulatory amendments discussed below.

Additionally, the agency should recognize that the Pilot Program is not necessary to allow traditional OEMs to test non-FMVSS compliant vehicles on the roads; such manufacturers may make use of the testing exclusion found in the FAST Act. However, the Pilot Program will be very useful for (a) other entities that do not fall under the testing exclusion in the FAST Act and that may wish to test non-FMVSS compliant HAVs, and (b) any entity that may wish to deploy HAV on the road post-testing in the context of this Pilot Program.

### **3.1. FAST Act provision provides an immediate basis for on-road testing and participation in a NHTSA Pilot Program**

This provision (see [49 U.S.C. § 30112\(b\)\(10\)](#), which was added to the law in 2015 in the [FAST Act](#), section 24404) makes inapplicable for certain manufacturers the prohibition against introducing noncomplying vehicles in interstate commerce where vehicles are used for purposes of testing or evaluation. This provision applies only to manufacturers that introduced certified vehicles in the U.S. before December 4, 2015, and requires that (a) those manufacturers must have complied with NHTSA manufacturer identification and designation of agent regulations, and (b) that the test vehicles are not sold or offered for sale at the conclusion of testing or evaluation. This provision is fundamentally different from the statutory exemption provisions in that it requires no initiating action by the manufacturer or NHTSA in order to authorize on-road testing. Thus, most OEMs would qualify automatically to participate in a NHTSA Pilot Program for testing purposes (or their own, independent test programs) in terms of their ability to operate test vehicles on public roads (subject to the terms of the Pilot Program).

### **3.2. Exemptions from Prohibitions Concerning Non-Compliant Vehicles under Section 30113**

Where an entity does not qualify for the testing exclusion in the FAST Act, it may nonetheless seek an exemption from NHTSA under [49 U.S.C. § 30113](#). We note, however, that the exemption authority of 49 USC § 30113 is complex and burdensome on both manufacturers and the agency, which would substantially delay the initiation of on-road testing. This provision requires (in the testing context) a showing by the petitioning manufacturer that the exemption is in the public interest and consistent with safety law and –

1. Would “make easier the development or field evaluation of a new motor vehicle safety feature providing a safety level at least equal to the safety level of the standard” or
2. Compliance with the standard would “prevent the manufacturer from selling a motor vehicle with an overall safety level at least equal to the overall safety level of nonexempt vehicles.”

The required process for petitioning for exemption under section 30113 is set forth in [49 CFR Part 555](#).

Use of this exemption process would require manufacturers to develop and submit, and the agency to review, analyses supporting the equivalence of the level of safety of the automated vehicle and the conventional vehicle. Developing methods to demonstrate equivalent levels of safety with regard to prototype vehicles could be a complex and difficult process. Requiring this be demonstrated as a condition of participation, limits the effectiveness of this exemption as a tool for achieving the goal of the rulemaking effort. Moreover, the “field evaluation” exemption procedure is authorized on a standard-by-standard basis, further increasing the burden and complexity of the exemption process. Reliance on this provision would not be an efficient means to authorize on-road testing of automated vehicles.

**3.3. Exemptions from Prohibitions Concerning Non-Compliant Vehicles under Section 30114**

This provision (see [49 U.S.C. § 30114](#)) authorizes the Secretary to exempt vehicles from the certification requirement “on such terms the Secretary decides are necessary for research, investigations, demonstrations, training” and other purposes.

NHTSA has used this authority with regard to imported vehicles – see [49 CFR 591.5\(j\)](#). Advance approval for this exemption is required in accordance with [49 CFR 591.6\(f\)](#), with detailed documentation showing the specific purpose(s) of importation. If public road testing is planned, the importer must explain why such testing is necessary and provide additional information regarding the planned scope of testing and the final disposition of the affected vehicles. NHTSA should consider expanding the scope of this exemption within the context of the Pilot Program to include non-import vehicles. This would be an efficient means for facilitating participation in a Pilot Program. This expanded approach should explicitly authorize exemptions for supplier companies, as manufacturers of “motor vehicle equipment.”