

August 22, 2019

U.S. House of Representatives Committee on Energy and Commerce  
2125 Rayburn House Office Building  
Washington, DC 20515

U.S. Senate Committee on Commerce, Science, and Transportation  
512 Dirksen Senate Office Building  
Washington DC, 20510

Chairs Wicker and Pallone, Ranking Members Cantwell and Walden:

Thank you very much for the opportunity to communicate our priorities for legislation on autonomous vehicles (AVs). Securing America's Future Energy (SAFE) has compiled a respected public record of policy positions and research on AVs – a partial list of which is included as an appendix to this letter. In recent years, we have had significant engagement on prior AV bills in Congress, as well as other legislation and regulations at the federal, state, and local levels.

In this letter, we succinctly offer our highest-priority recommendations in the areas for which the committees have requested feedback. We open with a few general comments about the compelling public interest in AVs, why federal legislation is important and urgent, and what the most important goals of legislation should be. We hope you will find our perspectives helpful and encourage you to contact us if we can provide further details or assistance.

### **High-Level Perspectives**

#### *The importance of AVs*

SAFE is a nonpartisan Washington, D.C.-based advocacy organization dedicating to supporting policies that reduce U.S. dependence on oil and improve energy security. We pursue this mission in partnership with SAFE's Energy Security Leadership Council (ESLC), comprised of military leaders and senior business executives and co-chaired by Fredrick W. Smith, Chairman and CEO of FedEx Corporation, and General James Conway (Ret.), the 34th Commandant of the U.S. Marine Corps.

SAFE believes that automated vehicle technology will serve the national interest by accelerating market-based adoption of electric vehicles and reducing oil consumption, along with a range of other significant public benefits such as improved roadway safety and accessibility. As such, we support policies that will catalyze the safe deployment of automated vehicle technology and maximize the societal benefits of the technology.

### *The need for legislation this Congress*

The last decade has seen remarkable progress in the development of AVs, which are now in the earliest stages of public deployment. As the technology continues to develop rapidly, policymakers are faced with the challenge of creating a regulatory framework that appropriately balances the exciting opportunities offered by AVs with one that assures confidence in the safety of these vehicles.

A well-constructed regulatory environment will have manifold positive impacts. It would synchronize the private sector and public interests on the right level of safety assurance appropriate for public deployment of the technology. This will both ensure that AV testing and deployment is appropriately safe while setting clear expectations for the private sector. Since the development of standards is an extended process, it is appropriate – and urgent – for Congress to oversee and accelerate this effort.

Additionally, there is a strong role for Congress to help ensure the technology achieves its significant potential to deliver benefits to society – including advancing a transition to advanced fuel vehicles, improving the accessibility of our transportation sector, and offering greater mobility to disadvantaged communities. The earlier these considerations are a part of AV development programs, the more likely these benefits will be fully realized. Therefore, we urge Congress to pass comprehensive AV legislation as soon as possible.

### *General needs for legislation*

Further in this letter, we will comment on specific proposed elements of legislation, but at the highest level, we hope legislation would accomplish three goals:

- 1) Accelerate progress towards regulatory standards that assure the safety of AVs and eliminate barriers to innovative AV designs.
- 2) Establish an interim, federal regulatory framework that can improve the governance of AVs until a long-term framework is put in place; this interim framework is critical, as it would govern AVs as they ramp up commercial operation.
- 3) Advance the societal benefits of the technology.

### **Specific Recommendations**

The committees have sought out specific recommendations on a number of topics. We offer comments on the areas where we have priority recommendations. For the sake of brevity, we provide recommendations and, where necessary, a short explanation of our rationale.

#### Rulemakings, including updating existing standards and setting new standards

##### *Policy Recommendations*

**Update federal regulatory frameworks.** We recommend that Congress promote updated regulatory structures related to AV safety, whether through rulemakings or direct legislative action. The areas of greatest need are:

- 1) Reducing or removing barriers to AVs with innovative designs. This specifically refers to elements of the FMVSS which may not apply to vehicles without drivers (e.g. steering wheel or

backup camera display) and even those without passengers (e.g. seatbelts and airbags). Congress should accelerate the timetable for regulatory updates and should consider the possibility that AVs may be designed with limited operational design domains or may not have passengers.

2) We urge the committees to prioritize the creation of AV safety standards. In addition to setting procedures, milestones, and targets for the US Department of Transportation (DOT), we suggest that Congress instruct the Department to proactively engage with research and standard-setting processes, as this will accelerate convergence on an appropriate standard.

#### *Rationale*

Reducing the barriers to innovative designs would offer significant public benefit by allowing for greater efficiencies and accelerating the economic viability of vehicle electrification. A deeper analysis of the benefits and regulatory considerations relevant to vehicles with innovative designs can be found in our comments to NHTSA on [two recent](#) exemption petitions from AV developers.

SAFE believes that reasonable, effective performance-based standards for AV safety would be a boon for both the public and industry, and therefore recommends that Congress accelerate efforts to create such standards.

#### Federal, State and Local Roles and access to courts

##### *Policy Recommendations*

**Reinforce the longstanding federal role in regulating motor vehicles.** SAFE strongly recommends that Congress maintain the federal role in regulating vehicle safety and explicitly extend this approach to AVs. Therefore, we request that Congress reinforce the traditional role of NHTSA in setting and enforcing regulations pertaining to the design, construction, and performance of motor vehicles as it applies to AVs.

**Preserve state and local authorities.** At the same time, we believe it would be sound policy for states and local governments to retain control of the operational aspects of transportation, such as speed limits and emissions testing rules.

##### *Rationale*

SAFE believes that the federalization of vehicle safety regulations has historically been a successful approach and that a devolution of this authority to states and localities is not in the public interest. Just like AVs themselves, constructive standards and regulations require resources to develop; our argument is reinforced by the plethora of AV policies advanced at the state-level which are not evidence-based.

Regulation of the operational aspects of vehicles such as licensing, emissions testing, and permissible speeds are largely done at the local level to better fit with community needs and values. AVs do not change this need or relationship.

## Exemptions

### *Policy Recommendations*

**Exemptions should be adequately scalable.** SAFE recommends that Congress use exemptions as a viable interim regulatory solution until FMVSS can be updated. This principle implies that any solutions should be implemented at sufficient scale and duration to create a viable pathway for commercial deployment.

**The exemption review process should have predictable timelines.** We strongly believe that the exemption process will only be viable if Congress intervenes to improve the current DOT process. We recommend that legislation set a fixed period for the advancing of an exemption application (e.g. certifying as complete or rendering a decision).

**Congress should enforce exemption review timelines.** We suggest that legislation require some additional action if the timeline is not met. Our suggested mechanism is that extensions of a fixed duration be granted if the Secretary notifies the committees of jurisdiction in writing and with an explanation.

**Formalize DOT's enforcement authority in addressing defects.** To complement the role of exemptions in regulating vehicle design, we recommend that Congress formalize the DOT's policy that enforcement authority is the appropriate mechanism for assuring public safety from defects in automated functionality.

**Describe "exemptions" more accurately.** Finally, we recommend changing the term "exemption" to more accurate terminology when referring to AVs. To this end, we suggest that FMVSS exemptions, as they pertain to AVs, should be described as "alternative safety certifications for highly automated vehicles."

### *Rationale*

In the absence of an update to the broad regulatory framework, the main function of exemptions will likely be to accommodate new designs emerging from autonomous operation. Some operational designs include suggestions for vehicles that are meant for package delivery and will operate without passengers. Flexibility in design standards allow for the possibility of improved efficiency, accessibility, and economic viability, all of which are in the public interest.

Therefore, it is important that the Section 555 exemption process be a viable process, in terms of the mechanism by which exemptions are granted and the volume and duration of exemptions available. Recent experience has shown that the decision process for exemptions is unclear and that developers have neither guidance nor clear timelines, which impacts the utility of this statutorily-mandated process and adversely impacts the willingness of the private sector to develop new designs.

In our view, Section 555 works best when it answers the question of whether the vehicle design is safe, but it is not suitable as a mechanism to regulate the Automated Driving System (ADS) itself. If an ADS assessment could be formalized, it should be the subject of a rulemaking. If the assessment of ADS performance will be done on a less formal, *ad hoc* basis, then this is duplicative of the already existing defect authority.

Finally, we also recommend renaming Section 555 authority, as the current name is often interpreted, incorrectly, that companies are applying for exemptions from ADS-related oversight, when they are, in

reality, requesting relief from non-ADS related regulations. Therefore, we suggest that this authority be renamed to “alternative safety certification for highly automated vehicles.”

### Testing Expansion

#### *Policy Recommendations*

**Establish a level playing field.** We recommend that all AV developers – automakers and technology companies alike – be held to the same standard with respect to their ability to test vehicles which are not certified to FMVSS.

**Prioritize the societal benefits of AVs.** We recommend that Congress authorize the DOT to grant additional permissions to AV pilots which are focused on societal benefits.

### Advisory Committees

#### *Policy Recommendations*

**Form a committee of experts to inform the development of AV technology and standards.** We are supportive of creating a technical committee that informs rulemaking and suggest forming working groups focused on accessibility and energy use implications. We are supportive of additional working groups for legitimate needs.

**The committee should focus on safety metrics and draw on existing work by standards bodies.** We recommend that the subject areas for the technical committee include 1) AV safety metrics and 2) engagement with standards processes.

**Research should address the interplay between energy and transportation.** We also suggest including a study on the energy consumption and oil dependence implications of AVs, with the Department of Energy national laboratories as a potential resource.

### Safety Evaluation Reports

#### *Policy Recommendations*

**AV developers should be required to submit safety assessments to NHTSA.** We suggest that Congress mandate the submission of Safety Evaluation Reports and instruct the Secretary to regularly issue guidance on what should be contained in the Reports.

### Crash Data

#### *Policy Recommendations*

**Establish an AV crash database to inform safety research.** We support a requirement to report crashes involving AVs and incorporating reports into a DOT database. The goal of this database should be to support research into AV safety and the scope of data collected should reflect this.

### Resources for NHTSA

#### *Policy Recommendations*

**Ensure that NHTSA is adequately resourced.**

**Strengthen DOT's ability to draw on private sector expertise.** Restructure the DOT to enhance its ability to partner with the private sector to understand advanced technology and integrate lessons into regulatory process.

#### *Rationale*

Since NHTSA was created, the fatal crash rate on our roads has declined by over 75 percent. That is strong evidence in favor of federalizing AV safety efforts. However, to accomplish its role in regulating AVs, NHTSA must be properly resourced to simultaneously conduct multiple rulemakings, update policy guidance, initiate and advance complex defect investigations, and properly engage the research community.

Additionally, other agencies have achieved success in engaging emerging technologies through the use of flexible contracting mechanisms and organizational structures for conducting research. Implementing some of these measures may allow the DOT to better integrate its disparate modes and partner with the private sector in regulating emerging technology.

#### Disability Access

##### *Policy Recommendations*

**Accessibility must be a priority from the onset.** We strongly urge the committee to use legislation to advance the accessibility of AVs. For AVs to be successful, they need to not only be safe, but to positively impact people's lives.

**People with disabilities must be able to realize the benefits of AVs.** We recommend that Congress prevent states from discriminating against individuals with disabilities in issuing licenses for AVs, and that accessibility be a significant focus for advisory committees and working groups.

#### Maintaining DOT's existing authority over larger vehicles

##### *Policy Recommendations*

**Legislation should consider the range of on-road applications for AV technology.** SAFE strongly believe it is in the national interest for the responsible and well-thought legislative framework to be applied to all vehicles, regardless of weight class. This is especially true given that trucking may be an early application for AVs.

**Regulatory certainty on the Interstate Highway System should be prioritized.** It is our understanding that broader considerations may lead the committees to decide against the inclusion of commercial vehicles. If the committees do not wish to include commercial vehicles in this legislation, but is willing to consider an intermediate position, we suggest that the preemptive framework be applied at least for commercial vehicles travelling on Interstate Highways. This position reflects the need for a federal regulatory regime on federally funded roads. It would preserve the right for states to set their own rules over commercial vehicle automation on their streets, but not on trucks merely passing through on the Interstate Highway System.

#### **Conclusion**

We appreciate the opportunity to express our priorities and recommendations to the committees. Please do not hesitate to reach out if we can offer further information.

Best,

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## Selected SAFE Publications

### Academic Publications and Policy Reports

1. Batbold, G. and Bin-Nun, A. **The impact of transportation network companies: evidence from the 2017 National Household Transportation Survey** (in progress)
2. Bin-Nun, A., Panasci, A., and Tebbens, R. **Heinrich's Triangle, Heavy-tailed Distributions, and Autonomous Vehicle Safety** (submitted to *Transportation Research Record*)
3. Bin-Nun, A. and Binamira, I. **A ride-centered framework to assess the impact of shared autonomous vehicles** (revise and resubmit at *Transportation Research Review Part A*)
4. Bin-Nun, A. and Batbold, G. (2018). *Transportation Network Companies: Broadening Access and Improving the Efficiency of Travel*. Report. Securing America's Future Energy, Washington, DC.
5. Bin-Nun, A. et al. (2018). *America's Workforce and the Self-Driving Future*. Report. Securing America's Future Energy, Washington, DC
6. Bin-Nun, A. and Gerlach, J. *Using Fuel Efficiency Regulations to Conserve Fuel and Save Lives by Accelerating Industry Investment in Autonomous and Connected Vehicles*. Report. Securing America's Future Energy, Washington, DC.
7. Rosenker, M. and Bin-Nun, A. (2018, March 30th). "After tragic self-driving Uber accident, the government needs to set safety standards". *USA Today*.
8. Bin-Nun, A., Gerlach, J., and Mullett, R. (2017). *Heavy Duty Innovation: Energy, automation, and technology in the trucking sector*. Report. Securing America's Future Energy, Washington, DC
9. Bin-Nun, A. and Joseph, M. (2017, May 5<sup>th</sup>). "The link between autonomous vehicles and fuel efficiency efforts." *Sacramento Bee*
10. Claypool, H., Bin-Nun, A., Gerlach, J. *Self-driving cars: The impact on people with disabilities*. Report. Securing America's Future Energy, Washington, DC (2017)
11. Bin-Nun, A. (ed.). *Final Report: Commission on Autonomous Vehicle Testing and Safety*. Report. Securing America's Future Energy, Washington, DC (2017)

### Expert Testimony and Regulatory Comments

12. Bin-Nun, A et al. (2019). *Comments on Nuro, Inc. – Petition for Temporary Exemption for an Electric Vehicle with an Automated Driving System*. Comments to the National Highway Traffic and Safety Administration.
13. Bin-Nun, A et al. (2019). *Comments on General Motors, LLC – Petition for Temporary Exemption from Various Requirements of the Safety Standards for an All-Electric Vehicle with an Automated Driving System*. Comments to the National Highway Traffic and Safety Administration.
14. Bin-Nun, A. (2018). *Comments on a Pilot Program for Collaborative Research on Motor Vehicles With High or Full Driving Automation*. Comments to the National Highway Traffic and Safety Administration.
15. Bin-Nun, A. (2018). *Comments on Proposed Decision Authorizing a Pilot Test Program for Autonomous Vehicle Passenger Service*. Regulatory filing on proposed AV regulations by California Public Utility Commission.
16. Bin-Nun, A. et al. (2018). *Comments on Federal Motor Carrier Safety Regulations as a Barrier to the Safe Testing and Deployment of Automated Driving Systems-Equipped Commercial Motor Vehicles*. Comments to the Federal Motor Carrier Safety Administration.

17. Bin-Nun, A. (2018). *Response to Comments on Proposed Decision Authorizing a Pilot Test Program for Autonomous Vehicle Passenger Service*. Further Regulatory filing on proposed AV regulations by California Public Utility Commission.
18. Bin-Nun, A. (2017). *Comments on Automated Driving Systems 2.0*. Comments to the National Highway and Traffic Safety Administration.
19. Bin-Nun, A. *Regulatory recommendations for autonomous vehicle policy*. Memo to U.S. Department of Transportation leadership (available on request).
20. Bin-Nun, A. and Danko, E. (2017). *Comments on Notice of Modification of Proposed Regulations, Title 13 – Motor Vehicles*. Comments to the California Department of Motor Vehicles.
21. Diamond, R. and Bin-Nun, A. (2017, February 17<sup>th</sup>). “Self-Driving Cars: Road to Deployment.” Written testimony before the House Committee on Energy and Commerce, Subcommittee on Digital Commerce and Consumer Protection
22. Bin-Nun, A (ed.). *Comments on Federal Autonomous Vehicle Policy*. Docket No. NHTSA-2016-0090. Comments to National Highway Traffic Safety Administration.
23. Diamond, R. and Bin-Nun, A. (2016, March 15<sup>th</sup>). “Hand Off: The Future of Self-Driving Cars.” Written testimony before the House Committee on Energy and Commerce, Subcommittee on Digital Commerce and Consumer Protection