



Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington DC 20515

Bill Shuster
Chairman
Mathew M. Sturges
Staff Director

Peter A. DeFazio
Ranking Member
Katherine W. Dedrick
Democratic Staff Director

December 2, 2016

BACKGROUND MEMO

TO: Members, Subcommittee on Highways and Transit
FROM: Staff, Subcommittee on Highways and Transit
RE: Roundtable Policy Discussion on "Getting Smart on Autonomous Vehicles: Opportunities and Challenges for Transportation Transformation"

PURPOSE

The Subcommittee on Highways and Transit will meet on Tuesday, December 6, 2016, at 10:00 a.m., in 2167 Rayburn House Office Building, to hold a roundtable discussion on "Getting Smart on Autonomous Vehicles: Opportunities and Challenges for Transportation Transformation". The participants will be representatives of United States Department of Transportation (US DOT), the City of Pittsburgh, the American Trucking Associations, Self-driving Coalition for Safer Streets, and the Insurance Institute for Highway Safety.

BACKGROUND

The National Highway Traffic Safety Administration (NHTSA) within the US DOT defines autonomous or self-driving vehicles as "those in which operation of the vehicle occurs without direct driver input to control the steering, acceleration, and braking and are designed so that the driver is not expected to constantly monitor the roadway while operating in self-driving mode."¹ The Society of Automotive Engineers International (SAE) has developed six standardized, internationally adopted definitions to describe these systems, from Level 0 (no automation) with incremental increased automation up to Level 5 (full automation).² Autonomous vehicles use cameras, radar, GPS, and other sensors to react to other vehicles on the roadway, and the level depends upon the number of features included on the vehicle. Autonomous vehicles are distinct from connected vehicles, although the technologies can work together. A connected vehicle enables vehicles, roads, traffic lights, and other infrastructure to communicate with each other to improve safety and efficiency.

The expanded deployment of autonomous vehicle technologies across the different levels of automation is likely to have tremendous impacts on the nation's surface transportation system,

¹ <http://www.nhtsa.gov/About-NHTSA/Press-Releases/U.S.-Department-of-Transportation-Releases-Policy-on-Automated-Vehicle-Development>

² http://www.sae.org/misc/pdfs/automated_driving.pdf

including improving transportation efficiency, safety, and mobility. For example, NHTSA estimates that in 2015 there were 35,200 traffic fatalities, 94 percent of which were caused by human errors that might have been prevented by autonomous vehicle technology.³ Autonomous commercial motor vehicles, transit and ridesharing could also provide opportunities and challenges for cities and states that will need to modernize their transportation systems.

Autonomous Vehicles in the FAST Act

On December 4, 2015, the President signed H.R. 22, *Fixing America's Surface Transportation Act* (FAST Act; P.L. 114-94) into law. The *FAST Act* updated several provisions of transportation statute to reflect the emergence of connected and autonomous vehicles. Specifically, the *FAST Act* creates a competitive advanced transportation and congestion management technologies deployment grant program to promote the use of innovative transportation solutions, including autonomous and connected vehicles. The deployment of these technologies will provide Congress and US DOT with valuable real life data and feedback to inform future decision making. Additionally, it provides funding opportunities for to universities undertaking research on how autonomous vehicles will impact transportation systems.

The *FAST Act* also continues funding for the Intelligent Transportation System (ITS) program, which supports various initiatives, including the research, development, testing, and validation of autonomous and connected vehicle technologies. The *FAST Act* ensures that all of these programs are implemented in a technology neutral manner.

The *FAST Act* also promotes technology neutral policies that accelerate vehicle and transportation safety research, development, and deployment by promoting innovation and competitive market-based outcomes, while using federal funds efficiently and leveraging private sector investment across the automotive, transportation, and technology sectors. Finally, to address swiftly advancing transportation technologies, the *FAST Act* makes several changes to ensure that federal regulations promote innovation, not stand in its way. By updating federal regulations, the *FAST Act* promotes the adoption of new technologies.

Draft Federal Automated Vehicle Policy

On November 20, 2016, NHTSA issued a federal policy for automated vehicle testing and deployment. The policy is comprised of four parts:

1. Vehicle performance guidance, including a 15 point "Safety Assessment";
2. Model state policy that clarifies the federal and state roles for regulation of autonomous vehicles;
3. Current regulatory tools that describes how NHTSA can use to support the Administration's goals for autonomous technology; and
4. Future regulatory tools that an Administration may seek.⁴

³ http://www.nhtsa.gov/About-NHTSA/Press-Releases/nhtsa_2015_traffic_deaths_up_07012016

⁴ <https://www.whitehouse.gov/the-press-office/2016/09/19/fact-sheet-encouraging-safe-and-responsible-deployment-automated>

On November 10, 2016, NHTSA held the first public meeting on the policy. The policy was open to public comment until November 22, 2016.

PARTICIPANT BIOGRAPHIES

Hon. Blair Anderson, Under Secretary for Policy, United States Department of Transportation (US DOT)

- Mr. Anderson was confirmed for his position, the third highest ranking in US DOT, in July 2016.
- Previously, Mr. Anderson served as Deputy Administrator of NHTSA.
- Mr. Anderson holds a Bachelor's degree from Princeton University.

Mr. Kevin Acklin, Chief of Staff and Chief Development Officer, City of Pittsburgh

- Pittsburgh won a *FAST Act* Sec. 6004 grant and is the site of Uber's autonomous vehicle testing.
- As Chief of Staff, Mr. Acklin reports directly to the Mayor and manages the City's Executive Team.
- As Chief Development Officer, he oversees all development activities in the city.
- Mr. Acklin holds a Bachelor's Degree from Harvard University and a J.D. from Georgetown University.

Mr. Chris Spear, President and CEO, American Trucking Associations (ATA)

- ATA represents the interests of the trucking industry.
- Previously Mr. Spear served as a Vice President of Government Affairs for Hyundai Motor Co. and Honeywell Process Solutions.
- Mr. Spear holds a Master's Degree and Bachelor's Degree from the University of Wyoming.

Hon. David Strickland, Counsel and Spokesperson, Self-driving Coalition for Safer Streets

- The Coalition is made up of auto manufacturers and ridesharing entities that support the safe and rapid deployment of autonomous vehicle technologies.
- Mr. Strickland also serves a partner in Venable, LLC regulatory practice.
- Previously Mr. Strickland served as the NHTSA Administrator.
- Mr. Strickland holds a J.D. from Harvard School of Law and a Bachelor's Degree from Northwestern University.

Mr. David Zuby, Executive Vice President and Chief Research Officer, Insurance Institute for Highway Safety (IIHS)

- IIHS is an independent, nonprofit scientific, and educational organization dedicated to reducing the losses from crashes on the nation's roads.
- Mr. Zuby works with the Vehicle Research Center to oversee and coordinate research activities.
- Prior to joining IIHS, Mr. Zuby conducted research on behalf of NHTSA.
- Mr. Zuby holds a Bachelor's Degree from Northwestern University.