



AM 2: Connected and Driverless Vehicles: Can Policy Keep Up with Technology?

Moderator:

Sarah Catz, Director, Center for Urban Infrastructure and Advisory Board Member, Mobility 21

Panelists:

- Hon. Ben Allen, Senator, California State Senate
- Randy Iwasaki, Executive Director, Contra Costa Transportation Authority
- Dave McCreadie, Manager of Vehicle Electrification & Infrastructure, Ford
- Eric Noble, Found and President, The CARLAB

Summary

This session addresses the challenges and opportunities facing policy makers and stakeholders to prepare for the mainstream arrival of autonomous and connected vehicle technology. Major benefits of driverless cars are increased safety and increased mobility independence in the lives of elderly or disabled populations. Furthermore, the advancement of 5G technology will provide faster services, more reliability and enhanced situational awareness. The major challenge facing policy makers is how to regulate new technologies to provide for the safety of the public, while allowing market forces to take some control of the process.

The audience learned that many policy implications of driverless vehicles and connected vehicles have not been explored yet. Thus far, policy has mainly focused on public safety concerns such as operational safety, reliability of technology and necessary safe guards. The panelists shared that the first step to protecting safety while not over regulating technology is to allow these vehicles to be tested. Then, additional policy concerns about the wide use of these vehicles can be explored. Other policy concerns identified by the panelists include whether autonomous vehicles will enable more cars on the road and more vehicle miles traveled. To this end, additional unanswered questions include the potential impacts on greenhouse gas emissions, on parking and roadway needs, as well as the influence on mass transit options. Liability and ethical concerns over the decision-making process of machines also raises uncertainty about how the public will adopt these issues in years ahead. The panelists expressed the need for a comprehensive approach to electric and connected systems to provide for safety and security of other modes, as we grasp the gains and consequences of autonomous vehicles.

Takeaway

Autonomous vehicles could remove the pain of driving in rush hour or of having a long commute. So a consequence of automation could be larger vehicles and more vehicle miles traveled. These consequences all have implications on infrastructure and land use planning, which need to be considered.

The U.S. is responsible for roughly a fifth of global CO2 emissions, and the transportation sector is responsible for about one third of that. These figures reinforce the need to start to transfer gasoline miles to electric miles.

The average U.S. motorist drives 37 miles per day however the average distance traveled in an electric vehicle is about 29 miles a day. Therefore the development of longer-range electrified vehicles will do a lot to help support growth of renewable energy generation.

The development of a streamlined permit process for charging stations could help expand the adoption of electric and connected vehicles.

California has been an integral part of the autonomous vehicle environment. Only three other states aside from California have taken this on: Nevada, Florida and Michigan.

In the U.S., about 35,000 people die each year from traffic accidents.

Vehicle electrification so far is only a product of regulatory incentives. We should consider if subsidization of electric vehicles promotes additional vehicles on roadways.

In 2012, the California State Legislature passed SB 1298, California's first effort to address autonomous vehicles. This bill told the DMV to develop regulations to allow autonomous vehicles to be safely tested and driven on California roadways. It also required a qualified test-driver to be in the car at all times.