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November 19, 2019

Elon Musk
Co-Founder and CEO
Tesla
3500 Deer Creek Road
Palo Alto, California 94304

Dear Mr. Musk:

I write to inquire about what actions Tesla is taking to prevent drivers from evading the safety features built into your cars' Autopilot system. According to a recent report, Tesla drivers have identified a variety of ways to circumvent the safety alerts and automatic shut-off feature that are designed to activate when a user of Autopilot is no longer paying attention to the road.¹ These techniques reveal inherent flaws in Tesla's Autopilot system that may pose a public safety danger and Tesla should quickly take action to address these risks before any tragedy occurs.

Currently, Tesla drivers can learn from online videos how to trick their Autopilot system into believing they are actively paying attention to the road even if they are asleep or otherwise unengaged.² These easily accessed techniques include strategically resting a driver's hand at the six o'clock position on the wheel, tying a weight to the wheel, and wedging a water bottle or an orange into the wheel.³ In one alarming example that was the subject of a recent press report, a Tesla driver used one of these techniques and then fell asleep even while his car drove for fourteen miles on Autopilot without his attention.⁴ Thankfully, no tragedy resulted from this specific incident, but I am deeply troubled by what could have happened if the car came across conditions that Tesla's Autopilot is not capable of addressing on its own — such as an intersection with a traffic light.⁵

This report illustrates why we must be cautious when deploying autonomous vehicle (AV) technologies on public roads. In response to a pedestrian fatality caused by an AV and driven by my concern with the need for safety on public roads, I wrote to Tesla in May 2018 to inquire

¹ Ryan Kath, *Tesla Owner Says He Fell Asleep Behind Wheel With Car in Autopilot Mode*, NBC Boston (Nov. 11, 2019), <https://www.nbcboston.com/investigations/Tesla-Owner-Talks-Sleeping-Car-Autopilot-Mode-564761842.html>.

² *Id.*

³ *Id.*

⁴ *Id.*

⁵ *Id.*

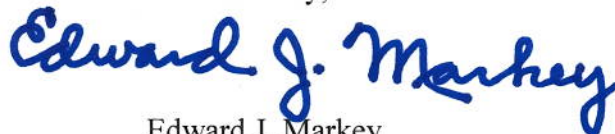
about your company's safety protocols and practices while testing AV technology.⁶ In your inadequate and unconcerned June 2018 response, Tesla failed to recognize the potential harm your Autopilot system could cause. Instead, Tesla ignored my questions about Autopilot's safety features and instead cited the Autopilot system itself as a robust safety feature.⁷ Tesla's disregard for the importance of safety features and significant reliance on Autopilot makes the recent report about drivers evading your safeguards both unsurprising and troubling.

I believe that Tesla cannot rely on a single flawed system to protect its drivers and other users of our roadways. Instead, Tesla must take more robust action to prevent any harm before tragedy occurs. Accordingly, I respectfully request that, by December 6, 2019, you respond in writing to the following questions:

1. Does Tesla exhaustively test potential methods for evading Autopilot's safety features? If so, please describe your testing methods in detail. If not, why not?
2. Does Tesla track or otherwise monitor the online videos that drivers are posting to share tricks for circumventing Autopilot's safety features? If so, what does Tesla do with this information once discovered? If not, why not?
3. What actions is Tesla taking to upgrade the Autopilot system in Tesla cars currently on the road to address these now-known flaws? What action is Tesla taking to improve Autopilot for future models of Tesla cars before they are put on the market?
4. What safeguards beyond the Autopilot system is Tesla deploying, or considering deploying, to address the risks of AV technologies on public roads?

Thank you for your attention to this important matter. If you have any questions, please contact Eric Kashdan of my staff at eric_kashdan@markey.senate.gov.

Sincerely,



Edward J. Markey
United States Senator

⁶ Press Release, Senators Markey and Blumenthal Begin Investigation Into Safety Protocol and Practices for Driverless Car Testing on Public Roads (May 25, 2018), <https://www.markey.senate.gov/news/press-releases/senators-markey-and-blumenthal-begin-investigation-into-safety-protocol-and-practices-for-driverless-car-testing-on-public-roads>.

⁷ Letter from Tesla to Senators Markey and Blumenthal Re: Testing Autonomous Vehicles on Public Roads (June 8, 2018), <https://www.markey.senate.gov/download/tesla-response>.