United States Senate
WASHINGTON, DC 20510

February 8, 2022

Mr. Elon Musk
Co-founder and Chief Executive Officer
Tesla
3500 Deer Creek Road
Palo Alto, California 94304

Dear Mr. Musk,

We write to express our significant concerns over recent reports of flaws with Tesla's Autopilot and Full Self-Driving (FSD) systems. While advanced driver assistance and automated driving systems have the potential to improve safety, they must be implemented responsibly and comply with existing traffic laws. When these systems do not meet these essential requirements, they put all of those who use our roads at risk of injury or death.

We are deeply troubled by Tesla's design choices that seemingly encourage unsafe driving habits. Last October, Tesla's FSD version 10.3 update included three different driving profiles – Chill, Average, and Assertive – and implemented a "rolling stops" feature, allowing cars to drive through stop signs at up to 5.6 miles per hour instead of making a complete stop. The Assertive FSD profile specifically states that cars will have smaller following distances and may complete rolling stops.[1] Last week, Tesla issued a recall for the nearly 54,000 vehicles running this version of FSD or newer.[2] While this recall is a step towards reducing unsafe driving and crashes, it should not have been needed in the first place – Tesla should not design and implement features for its cars that do not follow the rules of the road.

Moreover, we are concerned by Tesla's long history of flouting basic safety standards, which has caused the National Highway Traffic Safety Administration (NHTSA) to repeatedly open investigations into various aspects of the FSD and Autopilot systems. Last August, NHTSA opened an investigation into reports of Tesla vehicles on Autopilot crashing into emergency responder vehicles.[3] In December, NHTSA opened an investigation into reports that Tesla

[1] Emma Roth, "Tesla's 'Full Self-Driving' beta has an 'assertive' driving mode that 'may perform rolling stops,'" *The Verge*, January 9, 2022, https://www.theverge.com/2022/1/9/22875382/tesla-full-self-driving-beta-assertive-profile; Rebecca Heilweil, "Why Tesla won't stop," *Vox*, February 4, 2022, https://www.vox.com/recode/22916870/tesla-software-update-recall-full-self-driving-elon-musk.
[2] National Highway Traffic Safety Administration, "Part 573 Safety Recall Report: Recall No. 22V-037," https://static.nhtsa.gov/odi/rcl/2022/RCLRPT-22V037-4462.PDF (accessed February 7, 2022).
[3] U.S. Department of Transportation, National Highway Traffic Safety Administration, "ODI Resume: Autopilot & First Responder Scenes," https://static.nhtsa.gov/odi/inv/2021/INOA-PE21020-1893.PDF (accessed February 7, 2022).

operators could play games in their car while the vehicle was driving.[4] NHTSA is now reviewing complaints it received about "phantom braking" by Tesla vehicles, instances when a car brakes without a hazard in front of it.[5] These complaints and investigations paint a troubling picture: Tesla repeatedly releases software without fully considering its risks and implications, creating grave dangers for all on the roads.

In light of these concerns, we respectfully request answers to the following questions by February 22, 2022:

1. Please explain Tesla's decision-making process for the design and programming of rolling stops, including when they were first considered, why they were considered, what alternatives were considered, and who was responsible for final approval of their implementation.

2. Please list in detail the features associated with each of the driving profiles offered in FSD, including features now removed such as rolling stops.

3. Do any of the features provided in the answer to question two, or any other feature available on a Tesla, fail to follow traffic safety laws or allow drivers to direct the vehicle to disobey traffic laws? If so, please note and describe each feature, including when it was first implemented, why it was designed, and whether there were any crashes or incidents associated with it.

4. What features has Tesla previously implemented and then withdrawn that violated traffic safety laws? Did Tesla engage with NHTSA and notify consumers via a recall notice in such cases? For all such features, please note and describe each feature, including when it was first implemented, when it was removed, why it was designed, and whether there were any crashes or incidents associated with it.

5. Reports of phantom braking have increased significantly since last October, when Tesla issued a recall to correct false forward-collision warnings and/or automatic emergency brake events.[6] Please describe the changes made as a result of this recall notice, the corrective actions Tesla has taken since learning of these more recent reports, and the effectiveness of these actions.

6. Are all Tesla vehicles that come with Autopilot or FSD capabilities equipped with an effective camera-based driver monitoring system that restricts the use of these capabilities if the camera is covered or if it detects that the driver's eyes are off the road? If not, by what date does Tesla plan to make such a system standard for all Autopilot and FSD-equipped vehicles? Additionally, what other driver monitoring systems does Tesla utilize in its vehicles to ensure drivers remain fully alert?

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[4] U.S. Department of Transportation, National Highway Traffic Safety Administration, "ODI Resume: Tesla "Passenger Play,"" https://static.nhtsa.gov/odi/inv/2021/INOA-PE21023-9605.PDF (accessed February 7, 2022).
[5] Faiz Siddiqui and Jeremy Merrill, "Tesla drivers report a surge in 'phantom braking,'" *Washington Post*, February 2, 2022, https://www.washingtonpost.com/technology/2022/02/02/tesla-phantom-braking//
[6] Siddiqui and Merrill, "Tesla drivers."

Thank you for your attention to this important matter, and we await your response.

Sincerely,

RICHARD BLUMENTHAL
United States Senate

EDWARD J. MARKEY
United States Senate