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February 10, 2020

Chairwoman Schakowsky and Ranking Member McMorris-Rodgers
Subcommittee on Consumer Protection and Commerce of the Committee on Energy and
Commerce

Dear Chairwoman Schakowsky and Ranking Member McMorris-Rodgers:

Thank you for your leadership in holding today's important hearing on the development and introduction into society of autonomous vehicle technology. Nuro supports the subcommittee's efforts to advance bipartisan autonomous vehicle legislation that creates a clear regulatory framework and promotes a high standard of safety across the industry.

Nuro has built a new class of vehicle from the ground up: lightweight, zero-occupant delivery vehicles, originally engineered and manufactured to be operated autonomously rather than retrofitted. Nuro's vehicles never get distracted or impaired, have complete 360-degree vision, and are programmed to obey the rules of the road consistently. They offer a significant opportunity to address the more than 35,000 fatalities that are now occurring yearly on our roads. Zero-occupant vehicles like Nuro's present an untapped opportunity to rethink our use of the car itself, but this could be hampered if the current regulatory barriers to this important innovation are not expeditiously addressed.

Even though zero-occupant vehicles will never have a person inside, they are required to have equipment meant for human drivers and passengers, like side mirrors and a windshield. Last week, DOT approved Nuro's regulatory exemption, allowing us to remove this passenger car equipment from our R2 vehicle. This marked the first time an exemption has been granted for an autonomous vehicle. It is an important milestone for the industry, as it shows that DOT will act to address regulations that stand in the way of safety innovations, and because DOT explained that this equipment not only is unnecessary, it can make these vehicles less safe by adding width, weight, and rigidity.

DOT has taken a critical first step in enabling safety innovations, but exemptions are a temporary fix for an industry that's reimagining what it means to drive. Moving forward, we must modernize the existing regulations that never envisioned a vehicle without a driver or occupants, and everyone in the industry must work to ensure self-driving technology is tested and deployed in the safest possible vehicles.

Today, we respectfully submit these comments to highlight in particular the life-saving benefits of autonomous vehicles versus traditional automobiles, and how autonomous technology can expand on the approach to road safety implemented by the National Highway Traffic Safety

Administration over the past several decades. This opportunity highlights the urgency of federal action to support the introduction of zero-occupant vehicles and other, novel vehicle types enabled by self-driving technology.

The best way to improve American road safety is to help people to stay off the roads.

Over the past half-century, automotive safety innovation has focused overwhelmingly on occupant protection, reducing the occupants' risk of injury or death in a collision. What has escaped adequate consideration is that the safest protection for people is not an airbag or seatbelt. With 43% of car trips dedicated to performing shopping or other errands, nearly half of all trips we take can be replaced by an autonomous delivery vehicle that brings items to our homes, while we remain safely off the roads. *Imagine the safety impact of eliminating occupants from nearly half of all vehicle trips.*

Zero-occupant vehicles focus on protecting people outside the vehicle, not what's inside.

Without the need for front seats or equipment to protect a driver or passengers, dedicated autonomous delivery vehicles can be narrower and lighter, taking up less space on the road and more nimbly avoiding pedestrians and bicyclists. With no one inside to protect, the vehicle can self-sacrifice to avoid a collision, prioritizing human life outside the vehicle at all costs. The vehicle can even be specifically designed with a crumple zone to mitigate the impact of crashing into another road user. The benefits also extend to driving behavior. With no one in the vehicle to get impatient or uncomfortable, Nuro's vehicle can choose conservative routes and driving styles, or brake suddenly in an emergency.

There is an urgent need for increased focus on pedestrian safety. In 2018, there were 6,283 pedestrian fatalities in the United States, a 3% increase from 2017, and the highest national level since 1990. At the same time, SUVs and light trucks are an increasing share of American vehicles, accounting for 69% of new US vehicle sales in 2018. These vehicles are 2-3 times more likely to kill pedestrians in a collision than a passenger car. *Small, lightweight delivery vehicles can replace many trips by SUVs, light trucks, and passenger cars with a vehicle optimized for pedestrian protection.*

Federal regulatory action is urgently needed to save American lives.

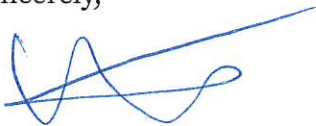
Today's vehicle safety standards were developed decades prior to the emergence of autonomous technology. They are imbued with the presumption that cars will always have drivers, passengers, seats, airbags, brake pedals, and side mirrors. That presumption has now been outmoded. We respectfully submit that our federal government should move quickly to bring federal motor vehicle safety standards into the modern age. The opportunity to save lives is tremendous, and the timing is critical. While those regulations are being written, we support legislation that would give NHTSA more flexibility in the number of vehicles subject to an exemption, so that vehicles can be built in sufficient quantities to enable the assembly line manufacturing that is critical for economical production.

The autonomous vehicle legislation that your Committee has been working towards would improve public trust in this new technology, create a clear regulatory framework, and promote a high standard of safety across the industry. Nuro supports legislation that would help the National Highway Traffic Safety Administration move expeditiously to set standards that ensure zero-occupant vehicles have all critical safety equipment, while also removing regulatory barriers that provide no safety benefit and impede the deployment of safety innovations like zero-occupant vehicles.

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Thank you for holding this important hearing. If you would like to discuss these matters further, please contact Matthew Lipka at mlipka@nuro.ai or 609-731-3896.

Sincerely,



David Estrada
Chief Legal and Policy Officer
Nuro