

BY ELECTRONIC SUBMISSION

Docket Management Facility  
U.S. Department of Transportation  
West Building Ground Floor, Room W12-140  
1200 New Jersey Avenue, SE  
Washington, DC 20590-0001

Re: **Request for Comments on Petition of Nuro, Inc. for Temporary Exemption  
for an Electric Vehicle with an Automated Driving System  
Docket No. NHTSA-2019-0017**

Dear Sir or Madam:

On behalf of the Consumer Technology Association (“CTA”), we urge the U.S. Department of Transportation’s (“USDOT”) National Highway Traffic Safety Administration (“NHTSA”) to grant Nuro’s petition for exemptions to enable the further development of its “R2X” autonomous delivery robot. This is a pivotal opportunity for NHTSA to accelerate the development of automated vehicle (“AV”) technologies that have tremendous potential to expand mobility, reduce emissions, drive economic growth, and, above all, enhance safety on our nation’s roads and highways.

NHTSA has encouraged all entities, from traditional OEMs and suppliers to technology companies and new entrants, to seek use of its exemption authority to demonstrate the safety benefits of AV technologies.<sup>1</sup> We appreciate the agency’s commitment to using its regulatory tools to advance innovation and NHTSA’s related streamlining and modernization efforts, including the amended exemption procedures adopted this past December.<sup>2</sup> Nuro’s petition allows the agency to carry these efforts forward by giving them practical effect. This is a crucial step to validate the exemption pathway to support AV testing and development, particularly for innovative vehicle designs like the R2X which were not anticipated by NHTSA’s current regulations.

CTA’s support for Nuro’s petition is informed by our broad perspective on the promise of AV technology and our desire to ensure a level playing field that facilitates safety and innovation and drives new investment and jobs in the United States. As the trade association representing the \$398 billion U.S. consumer technology industry, our membership spans the full ecosystem

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<sup>1</sup> DOT/NHTSA Policy Statement Concerning Automated Vehicles: 2016 Update to “Preliminary Statement of Policy Concerning Automated Vehicles,” <http://www.nhtsa.gov/staticfiles/rulemaking/pdf/Autonomous-Vehicles-Policy-Update-2016.pdf>.

<sup>2</sup> Temporary Exemption from Motor Vehicle Safety and Bumper Standards, 83 Fed. Reg. 66,158 (Dec. 26, 2018) (to be codified at 49 C.F.R. pt. 555).

of companies working to bring AV innovations to America's roadways, including vehicle and component manufacturers, software developers, transportation platforms, and companies engaged in multiple areas of this frontier industry. Reflective of our name, we also have a keen focus on what these innovations mean for the consumers who will use them.

The transformative potential of AVs like the R2X for industry and consumers alike supports our view that granting Nuro's petition is consistent with the public interest and with the National Traffic and Motor Vehicle Safety Act (the "Safety Act"), as required by the exemption statute.<sup>3</sup> In evaluating past exemption petitions, "NHTSA has traditionally found that the public interest is served by affording consumers a wider variety of motor vehicles, encouraging the development of fuel-efficient and alternative-energy vehicles, and providing additional employment opportunities."<sup>4</sup> NHTSA has also found that the public interest is served by demonstrating the viability of new technologies<sup>5</sup> and by generating data to support future NHTSA policy decisions.<sup>6</sup> As detailed below, granting Nuro's petition would advance each of these objectives, as well as the Safety Act's paramount goal of reducing traffic accidents and deaths and injuries resulting from traffic accidents.<sup>7</sup>

**Safety.** More than 37,000 people lost their lives on U.S. roadways in 2017, and hundreds of thousands more were injured in motor vehicle accidents.<sup>8</sup> NHTSA has found that driver error is a factor in more than 94 percent of serious crashes.<sup>9</sup> By diminishing the human role in the driving task, AV technology has the potential to eliminate this risk and substantially improve overall safety. As the latest version of the agency's AV policy guidance concludes, AV technology's "potential to reduce deaths and injuries on the Nation's roadways cannot be overstated."<sup>10</sup>

USDOT's AV guidance, while acknowledging that "[o]n-road testing cannot be expected to address all aspects of testing needs towards deployment,"<sup>11</sup> also draws a link between safety outcomes and field evaluation programs like the one contemplated by Nuro's petition: "On-road testing and early deployments are important to improving automated vehicle performance and allowing them to reach their full performance potential. Careful real-world testing allows developers to identify and rapidly fix system shortcomings, not just on individual vehicles but across fleets."<sup>12</sup> Nuro's petition indicates that the requested exemptions are necessary to carry out this "real-world" testing of the R2X.<sup>13</sup> Granting the petition would thus advance NHTSA's objective of enhancing vehicle safety through automation.

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<sup>3</sup> 49 U.S.C. § 30113(b)(3)(A).

<sup>4</sup> Wheego Electric Cars, Inc.; Grant of Petition for Temporary Exemption from the Electronic Stability Control Requirements of FMVSS No. 126, 77 Fed. Reg. 47,915, 47,917 (Aug. 10, 2012) (hereinafter, "Wheego petition").

<sup>5</sup> Toyota Motor North America, Inc.; Grant of Petition for Temporary Exemption from an Electrical Safety Requirement of FMVSS No. 305, 80 Fed. Reg. 101, 103 (Jan. 2, 2015).

<sup>6</sup> Mercedes-Benz, U.S.A. LLC; Grant of Application for a Temporary Exemption From Federal Motor Vehicle Safety Standard No. 108, 71 FR 4,961, 4,963 (Jan. 30, 2006).

<sup>7</sup> 49 U.S.C. § 30101.

<sup>8</sup> U.S. DEP'T. TRANSP., PREPARING FOR THE FUTURE OF TRANSPORTATION: AUTOMATED VEHICLES 3.0 at 3 (2018) (hereinafter, "AV 3.0").

<sup>9</sup> *Id.*

<sup>10</sup> *Id.* at 1.

<sup>11</sup> *Id.* at 38.

<sup>12</sup> *Id.* at 1.

<sup>13</sup> Petition of Nuro, Inc. for Exemption from Certain Provisions of Federal Motor Vehicle Safety Standard, No. 500 (Oct. 19, 2018) (hereinafter, "Nuro petition"), at 18–19.

NHTSA's exemption decisions have also considered the consequences of denying an exemption request.<sup>14</sup> In this case, there would be two main drawbacks, neither of which is consistent with NHTSA's safety goals. First, denial would limit Nuro to testing the R2X in private, controlled environments—eliminating the opportunity for “real-world” learning that the agency has deemed important. Alternatively, as the petition describes, “Nuro would be required to add extraneous equipment during public roads testing that increases pedestrian strike risk, adds mass, and worsens the impact of collisions.”<sup>15</sup> A denial of Nuro's petition that produces these results would be a perversion of NHTSA's statutory objective to enhance safety and undermine the agency's commitment to innovation and new vehicle designs. It would also overlook Nuro's plans to implement extensive precautionary measures to support the safe operation of exempted vehicles.<sup>16</sup>

**Consumer Choice.** With the R2X, Nuro is pioneering an entirely new category of motor vehicles: autonomous delivery robots. Innovations that create new product categories increase consumer choice by definition. In this case, the R2X would offer an alternative to traditional delivery trucks, as well as the need for consumers to visit stores themselves—an innovation that could be especially beneficial for individuals with limited mobility options, as described below. Nuro's ability to offer this new option depends on the refinement of its technology through real-world testing. Granting the requested exemptions would thus support consumer choice by allowing Nuro to continue on the path toward commercialization of its new and innovative delivery services. In addition, NHTSA has previously found that the development of electric vehicles like the R2X contributes to the expansion of consumer choices in and of itself.<sup>17</sup>

**Environmental Benefits.** NHTSA has also found that “it is manifestly in the public interest to accelerate the development of electrically driven vehicles.”<sup>18</sup> Granting Nuro's petition would support extension of electric vehicle innovation to the emerging category of autonomous delivery robots, proving the viability of electric-drive powertrains in a new motor vehicle category that could yield a range of environmental benefits in terms of reduced emissions and fuel consumption. These development activities and the benefits they would support are consistent with the legislative history of the low-emission vehicle exemption basis as documented by NHTSA.<sup>19</sup>

**Employment Benefits.** Nuro's petition explains how granting the requested exemptions will allow the company to maintain and grow its existing workforce and support additional employment opportunities with the company's retail partners.<sup>20</sup> The exemptions will allow Nuro to continue the commercialization of the R2X, which in turn will yield revenue to support this U.S. job creation. NHTSA has previously found that the public interest is served by precisely this dynamic.<sup>21</sup>

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<sup>14</sup> See, e.g., Wheego petition at 47,917.

<sup>15</sup> Nuro petition at 19.

<sup>16</sup> *Id.*

<sup>17</sup> Think Technology AS; Grant of Application for a Temporary Exemption from the Advanced Air Bag Requirements of Federal Motor Vehicle Safety Standard No. 208, 74 Fed. Reg. 40,634, 40,636 (Aug. 12, 2009).

<sup>18</sup> *Id.* (explaining that “Electric vehicles can help reduce the reliance of the nation on oil, and reduce greenhouse gas and other emissions.”).

<sup>19</sup> Nuro, Inc.; Receipt of Petition for Temporary Exemption for an Electric Vehicle With an Automated Driving System, Docket No. NHTSA-2019-0017, 84 Fed. Reg. 10,172, 10,176 fn. 21 (Mar 19, 2019).

<sup>20</sup> Nuro petition at 6.

<sup>21</sup> Greenkraft, Inc.; Grant of Application for a Temporary Exemption from FMVSS No. 108, 80 Fed. Reg. 12,057, 12,060-1 (Mar. 5, 2015) (“Granting this exemption will enable Greenkraft to more quickly begin selling vehicles which

Supporting Nuro's continued commercialization of the R2X by granting the petition will also contribute to the broader job creation potential of AV technology. A recent CTA research report found that the consumer technology industry supports 18.2 million American jobs and provides \$1.3 trillion in annual wages.<sup>22</sup> Employment driven by AV innovation represents a significant and rapidly growing segment of this overall total. Regulatory frameworks and decisions that support AV commercialization are essential to realizing the industry's employment potential.

**Economic Growth.** As a corollary to its employment impact, granting Nuro's petition would drive substantial economic growth. As described above, the requested exemptions are part of a path to commercialization that could lead to the development of a vibrant market for Nuro's products and services. In addition, the company is part of a broader AV ecosystem that has tremendous economic potential. CTA's research has shown that AV technology is expected to contribute \$7 trillion to the global economy annually by 2050—a substantial portion of which will be generated in the United States.<sup>23</sup> Aggregate growth projections like these are the sum of many individual contributions by companies like Nuro. By facilitating Nuro's development program, granting its petition will place the company in the best position to contribute to this broader economic growth.

Nuro's services also have the potential to create new economic opportunities and improve quality of life for the 20 to 30 million Americans of driving age whose physical disabilities have prevented them from driving, as well as the 16 million Americans over the age of 65 who have little or no access to public transportation. Nuro's technology can provide these communities with unprecedented autonomy in engaging with the economy, further compounding the potential economic benefits to be gained by granting the petition.

**Public Confidence.** Led by Secretary Chao, USDOT has highlighted the need to address public concerns about AVs and communicate the benefits of automation.<sup>24</sup> CTA's research has confirmed that consumers are eager to learn more about this technology.<sup>25</sup> Among other issues, U.S. adults are eager to learn more about the cost of purchasing and maintaining a self-driving vehicle, as well as how today's roads and other public infrastructure support both human-driven and self-driving cars operating together.<sup>26</sup>

Nuro has envisioned a use case for its technology that builds public awareness and confidence by design. As described in its petition, "[b]ecause of our unique footprint providing last-mile delivery to homes and businesses, Nuro's devices will be routinely visible to the consumer, accountable directly to the neighborhoods and communities in which they operate and commercially successful only if they are regarded as safe and beneficial."<sup>27</sup> By allowing

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will allow the company to begin realizing revenues from vehicle sales. The revenues from these vehicle sales will allow Greenkraft to continue to employ individuals involved in the manufacture and sale of these vehicles.").

<sup>22</sup> CONSUMER TECHNOLOGY ASSOCIATION, U.S. ECONOMIC CONTRIBUTION OF THE CONSUMER TECHNOLOGY SECTOR (APR. 2019), <https://www.cta.tech/Research-Standards/Reports-Studies/Studies/Supplements/Economic-Impact-Study.aspx>.

<sup>23</sup> CONSUMER TECHNOLOGY ASSOCIATION, ECONOMIC IMPACT: SELF-DRIVING VEHICLES at 10 (DEC. 2017), <https://www.cta.tech/Research-Standards/Reports-Studies/Studies/2018/Economic-Impact-Self-Driving-Vehicles.aspx>.

<sup>24</sup> AV 3.0 at ii.

<sup>25</sup> CONSUMER TECHNOLOGY ASSOCIATION, SELF-DRIVING VEHICLES: CONSUMER SENTIMENTS 2018 at 6 (OCT. 2018), <https://www.cta.tech/Research-Standards/Reports-Studies/Studies/2018/Self-Driving-Vehicles-Consumer-Sentiments-2018.aspx>.

<sup>26</sup> *Id.* at 15.

<sup>27</sup> Nuro petition at 4.

consumers to experience AV technology firsthand, granting Nuro's petition will directly advance the Department's educational priorities. Finally, as described below, Nuro's activities may generate data that can be used to inform other public education efforts.

**Data Sharing.** CTA supports the voluntary sharing of data that can help improve AV safety and performance. We are pleased that NHTSA has also similarly endorsed a voluntary approach to data exchange, and affirmed that "[a]ny exchanges of data should respect consumer privacy as well as proprietary and confidential business information."<sup>28</sup> To the extent that Nuro and NHTSA can agree upon a framework for the voluntary sharing of data about exempted vehicles, granting the petition could provide NHTSA with invaluable real-world information to support its ongoing oversight and policymaking activities in this area.

Taken together, these factors overwhelmingly support the conclusion that granting Nuro's petition would substantially advance the public interest and motor vehicle safety. The field evaluation Nuro has proposed would yield substantial public benefits in and of itself and is also an early step in the development of a broader industry ecosystem that will compound those benefits many times over. Moreover, Nuro's petition satisfies the factors that NHTSA has looked to in establishing the public interest as part of past exemption decisions. This is a landmark opportunity for NHTSA to advance its commitment to using its exemption authority to facilitate AV testing and development.

While the focus of our comments is on the public interest considerations outlined above, we encourage NHTSA to approach the specific questions posed in the Federal Register notice with a view toward the guiding principles for the agency's AV policy activities that we have advanced in our prior written comments to the agency. Above all, experience has shown that regulatory clarity and consistency are important to create a policy environment that allows innovation to thrive. Although AV technology is novel, NHTSA has well-established policies and procedures for evaluating exemption petitions and all stakeholders testing or deploying AV technologies should be able to avail themselves of the same federal policies and exemption pathways. The agency should follow this precedent as much as possible and avoid reading new or additional requirements into the exemption statute and regulations or NHTSA's approach to implementing them that would not have been anticipated by the applicants. Predictable and uniform application of NHTSA's rules and regulations is essential to cultivate a policy environment that encourages efforts to realize the safety potential of AV technology.

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<sup>28</sup> AV 3.0 at 31-32.

Thank you for your consideration of these comments. We are excited about NHTSA's review of Nuro's petition as another step forward in developing a pro-innovation policy framework around AV technology. As described above, we strongly believe that granting the petition would advance the public interest by enhancing safety, the environment, the economy, and mobility for all Americans. We look forward to your decision on the petition and to continued collaboration between government and industry in bringing AV innovation to the nation's roadways. Please do not hesitate to contact us with any questions you may have.

Sincerely,

/s/ Gary Shapiro

Gary Shapiro  
President and CEO  
Consumer Technology Association  
1919 S Eads St  
Arlington, VA 22206

/s/ Jamie Boone

Jamie Boone  
Vice President, Government Affairs  
Consumer Technology Association  
1919 S Eads St  
Arlington, VA 22206

/s/ Pamela Garvie

/s/ Peter Nelson

Pamela Garvie  
Peter Nelson  
K&L Gates LLP  
1601 K Street N.W.  
Washington, DC 20006

*Counsel for Consumer Technology Association*