

May 20, 2019

National Highway Traffic Safety Administration  
1200 New Jersey Ave SE  
West Building  
Washington, DC 20590-0001  
Re: Docket No. NHTSA–2019–0016

Local Motors, LLC. is responding to the National Highway Traffic Safety Administration’s (“NHTSA”) request for public comment as found in the Notice of receipt of petition for temporary exemption; request for public comment Docket No. NHTSA-2019-0016 (Document Citation: 84 FR 10182) by providing our perspective on some of the questions proposed to the public in the notice.

The Local Motors Olli is a Cognitive Self-Driving Shuttle. Over 30 sensors enable L4/L5 automation along with cognitive intelligence to allow direct interaction between vehicle occupants and Olli. Local Motors is conducting pilot deployments under controlled conditions and collecting raw data of vehicle operations from both the vehicle control unit as well as the autonomous control system. Directional data and sensor data are being used to research incidents in operation to continually enhance and improve performance.

Given our distinct role in the transportation sector and our learnings through the development and testing of HAVs and SDV systems, we want to highlight the following areas for your consideration as you consider granting the GM petition.

In response to question 2,

*‘2 If the agency determines that its authority to grant exemptions to facilitate the development or field evaluation of a new motor vehicle safety feature is the more appropriate basis under which to evaluate GM’s petition, does the petition provide sufficient information to enable the agency to make the required statutory finding as to whether the level of safety is equivalent to or exceeds the level of safety established in the FMVSS from which exemption is sought? If not, what additional information should the agency seek prior to rendering its final determination and why?’*

For the past several years NHTSA has encouraged manufacturers to petition the agency for these types of exemptions. It is in the public interest to give these types of vehicles an opportunity to operate on public roads and to do so requires granting these types of petitions. Local Motors believes the GM petition provides sufficient information to enable the agency to grant the petition. The fail safe for the agency is in the authority granted NHTSA to require recalls of defective equipment and or vehicles. Furthermore, a granted Part 555 petition may be terminated for the following reasons:

*“(c) Any interested person may petition for the termination or modification of an exemption granted under this part. The petition will be processed in accordance with the procedures of part 552 of this chapter.*

*(d) The Administrator terminates or modifies a temporary exemption if he determines that—*

*(1) The temporary exemption is no longer consistent with the public interest and the objectives of the Act*

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*(2) The temporary exemption was granted on the basis of false, fraudulent, or misleading representations or information.”<sup>1</sup>*

The options listed above basically allow NHTSA to observe and restrict detrimental activity that could become a risk to the public. The potential upside for the public is too great not to find a way to allow a temporary exemption for these and other vehicles seeking exemptions.

Another question Local Motors would like to address is #12.

*12. It could be argued that some FMVSS may either not be needed for safety or at least less needed for safety in the case of a vehicle that can be driven by only an ADS. Examples of potentially unnecessary features include inside and outside mirrors as well as the display of images from the rearview camera. Should test results or data be required to justify such an argument? If yes, what would be the most appropriate types of test results or data, and why?*

If a vehicle provides equal or superior performance, why should it have to include equipment that provides no practical use? The key is in determining if the vehicle provides equal or superior performance. The future of rulemaking and vehicle testing must be evidence and performance based.

Trying to normalize a test for human driver’s reaction time to receiving information would be difficult and maybe quite restrictive. Making sure a vehicle stops once given the command to stop within a specific distance is repeatable and could and should be applied to all vehicles.

The final question we would like to provide comments on is question 28.

*28. Over the history of the Agency, exemption petitions based on some form of safety analysis, as opposed to the much more common type of petition based on a claim of economic hardship, have averaged only 1–2 per year. Typically, these safety-based petitions have involved technologies that affect only a single vehicle function or at least a very narrow range of functions and that were well described and tested. Such petitions were resolved by the Agency’s either granting or denying them after soliciting and considering public comments. In some cases, the Agency sent requests to the applicant for additional test data. In most cases, this second group of petitions were either granted or denied, again after petition remained as “pending.” In our current innovative environment, such an approach presents challenges for technologies, e.g., automated driving systems for vehicles without manual driving controls, that affect a broad range of functions and that have not been developed sufficiently to incorporate them in vehicles in order to generate the real world test data that has typically been required for granting petitions. The lack of real-world test data could result in lengthy delays and even non-approval.*

*To address this problem, NHTSA solicits public comment on alternative approaches to analyzing and resolving petitions for exemption from FMVSS in a timely and appropriate way, including but not limited to: —After public comment, exercising our discretion to rely upon other forms of evidence in making the statutorily required findings quickly for petitions related to technology with significant lifesaving*

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<sup>1</sup> CFR Title 49 Part 555.8

*potential to allow for expedited approval for testing and development of a very limited number of vehicles<sup>2</sup> under well-defined, risk-managed conditions;*

*—Deny petitions if applicants are unable to respond adequately to NHTSA requests for further information within a specified time period; —For vehicles that would be deployed only within very limited operating areas, go beyond seeking public comment by hosting public meetings or otherwise providing for targeted and transparent public engagement in the intended geographical operating area to allow for full and transparent public discussion of novel safety issues and concerns, emergency response considerations, or other issues of interest to state and local stakeholders regarding the exemption requested and relevant to NHTSA’s review of the petition; —Any other options to process petitions in a way that is timely, transparent and supportive of the safety goals of the FMVSS from which exemption is sought.*

Short term vehicle demonstrations and pilot programs lend purpose to evidence and performance-based Rulemaking and Testing.

NHTSA has the authority and the responsibility to act in behalf of the public interest. The GM petition provides the information required by Part 555 and should be granted. NHTSA should also acknowledge and conduct rulemaking to allow for new vehicle classifications.

Local Motors’ approach to vehicle commercialization and deployment is unique among vehicle manufacturers. We work with a community of engineers, manufacturers, suppliers, partners and consumers to commercialize vehicles rapidly and continuously to make improvements in real time.

This approach enables the rapid integration of the latest technology as AVs are rolled out into commercial and consumer markets. It also enables lessons learned and failures to be incorporated into vehicle improvements and upgrades. Hence, this phased approach, especially during potential pilot projects, and direct interaction with customers and consumers turns unknowns into knowns in an open innovation environment. This theory of constant improvement with stakeholders was originally put to work in the Toyota Way and is now being adapted to modern digital methods.

We encourage NHTSA and US DOT to work and collaborate with us (and others who are willing and able to take part in similar pilot projects) to share data and information openly and develop real world applications and solutions that will make transit more readily available to all. Specifically, this open innovation and data sharing approach should help enable more evidence-based rulemaking and testing for AVs rather than the more traditional design-based rulemaking and testing employed in current FMVSS. In our new digital world, with technology changing so rapidly, vehicle types will be created, developed and produced in a matter of months, not a matter of years. Advances in robotics and artificial intelligence will create use cases that have no previous known design and may be impossible to test given our limited knowledge of today.

According to NHTSA:

*“A pilot program can provide relief and promote research on AVs and ADS. NHTSA’s authority covers all relevant aspects of ADS design, including vehicles with high and full driving*

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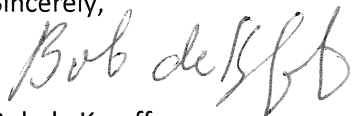
<sup>2</sup> *95 E.g.*, a number significantly less than the 2,500 vehicles per year authorized by 49 U.S.C. 30113.

*automation. NHTSA, therefore, has an affirmative duty to establish the measures necessary to ensure the safe design and operation of these types of vehicles. However, to do so in a way that actually achieves those safety goals and does not unnecessarily impede innovation requires significant research on these cutting-edge issues.*

*Due to the complexity of real-world driving, this research cannot simply be done in laboratories or other highly controlled testing environments and, instead, part of it must be done on public roads with real driving conditions. To help ensure that this testing is being done safely and with an eye towards developing the data necessary to support such future standards as may be needed, NHTSA is considering establishing a pilot program for vehicles with high and full driving automation for entities wishing to engage in the testing or, in some cases, deployment of vehicles with high and full driving automation that would require some type of an exemption from NHTSA's existing standards. The Agency believes that such a program could aid developers of vehicles with high and full driving automation in testing and deploying their vehicles across the country in a wide variety of scenarios, e.g., different climates, weather patterns, topographical features, road systems, population and traffic densities, etc."<sup>3</sup>*

We support GM's petition for exemption in this matter and encourage NHTSA to grant the petition thereby paving the way forward for transforming the transportation industry. We look forward to collaborating with both NHTSA and other industry stakeholders to further the adoption of ADS by the general public to create safer, smarter and more sustainable public roads for all. Local Motors believes that the future of transportation will be redefined by automated and autonomous vehicles.

Sincerely,



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<sup>3</sup> NHTSA ANPRM October 2018 Pilot Program for Collaborative Research on Motor Vehicles With High or Full Driving Automation