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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on Regulations Relating to Passenger Carriers, Ridesharing, and New Online Enabled Transportation Services	Rulemaking 12-12-011

OPENING COMMENTS OF THE METROPOLITAN TRANSPORTATION COMMISSION (MTC) TO THE ADMINISTRATIVE LAW JUDGE'S RULING ORDERING PARTIES TO COMMENT ON QUESTIONS REGARDING THE COMMISSION'S REGULATION OF AUTONOMOUS VEHICLES

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COMMENTS TO QUESTIONS 2-8

I. Introduction

In accordance with Rule 6.2 of the California Public Utilities Commission ("Commission") Rules of Practice and Procedure ("Rules"), and pursuant to Administrative Law Judge Robert M. Mason III's December 19, 2019 ruling, the Metropolitan Transportation Commission (MTC) respectfully submits these Opening Comments to the Order Instituting Rulemaking on Regulations Relating to Passenger Carriers, Ridesharing, and New Online Enabled Transportation Services (R.12-12-011 or "Rulemaking").

MTC is the transportation planning, financing and coordinating agency for the San Francisco Bay Area, a region that houses more than seven million people in nine counties and 101 cities. MTC is designated a regional transportation planning agency (RTPA) by the State of California and a metropolitan planning organization (MPO) by the federal government. With these designations, MTC's duties include: investing in strategic expansions of the transportation network to serve a growing population; prioritizing requests for limited regional, state and federal funds; and distributing funds to public transit agencies, as well as to county congestion management agencies, and to cities and counties for local investment priorities.

As an MPO, MTC complies with the requirements of Senate Bill 375, which includes completing a Sustainable Communities Strategy (SCS) as part of a Regional Transportation Plan. MTC and the Association of Bay Area Governments (ABAG) are jointly responsible for developing and adopting a SCS that integrates transportation, land use and housing to meet greenhouse gas reduction (GHG) targets set by the California Air Resources Board (CARB). For the next Regional Transportation Plan and SCS, Plan Bay Area 2050, MTC will need to achieve a nineteen percent per capita GHG reduction by 2035.

The nineteen percent target can be achieved through a mix of strategies, policies and investments and understanding the effects of future technologies. MTC explored the effects of AVs through *Horizon: Autonomous Vehicles,* and found that the technology could dramatically shape the future of the Bay Area, presenting major opportunities and risks to achieving an affordable, connected, diverse, healthy, and vibrant region. AVs will change how people travel, they will create new mobility choices, and they could transform public transit. However, AVs are an environmental wildcard; the technology has the potential to support or undermine climate and environmental protection efforts. AVs could disrupt the social fabric with major impacts on labor markets, equity, and access to opportunity, further exacerbating inequities. Fundamentally, AVs could influence how we plan, design, build, and operate cities.

While the magnitude of AVs' impact is not unique to the Bay Area, this region is uniquely situated to take advantage of the opportunities and mitigate against the risks AV present for three reasons. First, the Bay Area is home to much of the innovation driving this future paradigm shift. Second, since some of the region's governmental and non-governmental organizations already are planning for a world with AVs, the region and state has an opportunity to shape the future with thoughtful policies, programs, and pilots. Third, the diversity of the Bay Area can allow cities, suburbs, and towns to pilot and model policies that other communities can efficiently replicate.

MTC's AV study and current work informs the answers to the Commission's AV Goals-Related questions in the Rulemaking for the safety, accessibility, equity, congestion, climate and data issue areas, as detailed in the following sections.

Safety

The Commission should consider incorporating safety goals into its AV regulatory framework by:

1. Emphasizing AV speed limits
    - As the data shows, speed is a primary factor determining the severity of a collision
    - If AVs can be regulated such that existing speed limits are more effective, we can rely more on them for limiting severe crashes
    - Recognize that some speed limits are still too high for the road conditions
2. Emphasizing the safety of pedestrians in collision avoidance
    - Pedestrians, cyclists, and micromobility users are particularly vulnerable in collisions
    - Some AV developers have said that their safety priority will be the vehicle occupant, but the vehicle occupant is less at risk in a collision at a given speed than a non-motorized victim
    - AVs need to demonstrate to be able to accurately perceive and classify pedestrians and other vulnerable road users, and react accordingly
    - The Commission should consider requesting companies to provide data on collisions with vulnerable road users to create a record for the evaluation recommendations listed in #5 below
3. Understanding and correcting for the fallibility of the AV
    - While human drivers make (many) mistakes, AVs may make fewer, it is important to understand if that is in fact true which requires analysis of safety data and demonstration of this over time
    - It remains important to understand what mistakes AVs are prone to and correct for these faults, in addition to any road hazards they may create. AVs must be able to demonstrate before deployment that they are not prone to these mistakes or will create road hazards
    - AVs should be designed with "*Vision Zero"* in mind: any severe collisions involving an AV should be assessed by an objective third party to identify what the causes of the collision were, and how they can be addressed
4. Continuing to take action to improve faulty street designs
    - AVs still need to process signals and information for navigating streets
    - AVs should be able to function within and on existing infrastructure – local cities do not have the resources to upgrade their street infrastructure
    - Any upgrades should prioritize good street and information designs
5. Studying the before and after safety impacts of AV rollout (geographically and temporally)
    - While it is widely believed that AVs will have a major impact on safety, establishing evidence for this hypothesis will be important as AVs become more widespread,

- This research can support AV rollout if a significant positive impact can be demonstrated,
- As part of this, require data sharing in the case of collisions involving AVs
- For commercial deployment of AVs, the CPUC should require companies demonstrate compliance with equity, accessibility, safety and environmental goals and requirements.

Accessibility

The broadest definition of accessibility should be applied to the Commission's AV regulatory framework. The definition should include accessibility for people in wheelchairs, with hearing, vision, cognitive, and ambulatory difficulties, and those who rely on service and support animals. AVs should be "born accessible" and eliminate the need for fleet retrofitting or delay in serving people with disabilities. The Commission should ensure that the drivers of any manually-driven wheelchair-accessible vehicles used in a commercial AV service are properly trained on the securement of wheelchairs and proper passenger restraint for AVs with a driver. Senate Bill No. 1376 serves as a good foundation to build AV accessibility policies and requirements. However, AVs have more potential and opportunities to being accessible as compared to the current TNC operating model that provides service in personally-owned vehicles. Companies should design AV vehicles with equivalent service to people with disabilities at the outset, including for people who cannot transfer out of their wheelchairs.

Equity

AVs could benefit people from all backgrounds, abilities and ages; but could also widen the equity gap with declining public transit and service disparities. The Commission should require AV operators to monitor and improve their services through transparent reporting to achieve equitable outcomes for people from all backgrounds, abilities and ages. Service should be required to be provided equitably, especially those areas designated as Disadvantaged Communities by the State or as Communities of Concern by MTC.

Congestion

AVs are a significant risk to State, regional and local goals to reduce vehicle miles traveled (VMT) by providing a potentially cheaper mode of transportation. Significant public

resources are invested into public transit systems to reduce VMT, but to also provide adequate means and lifeline services for people from all backgrounds, abilities and ages to travel within the region. If AVs slow down high capacity public transportation routes through increased VMT, this may draw away riders resulting in less availability of public transit services. This may then result in a significant portion of the population losing vital lifeline services if AVs are not deployed in an equitable fashion. We recommend working with agencies with expertise in transportation planning and policy to develop protocols and policies effective in creating beneficial outcomes with AV technology.

Climate

The Commission should incorporate goals on environment and climate that are consistent with the goals specified by the California Air Resources Board (CARB), the California Department of Transportation (Caltrans) and the California Energy Commission (CEC). These goals should address the following, at a minimum:

- GHG emission reduction through the deployment of zero emission vehicles
- Congestion reduction through electrified autonomous shared modes which include transit, pooled TNCs, and delivery vehicles
- Achieving 100% clean energy, applied not only to emissions but to the full lifecycle of the AV (battery development, etc.)

In addition to SB 32, Assembly Bill (AB) 32, SB 350, SB 1014, SB 1376, and SB 375, the Commission should also reference SB 743, the intent of which is ensure that the environmental impacts of traffic, such as noise, air pollution, and safety concerns, continue to be properly addressed and mitigated through the California Environmental Quality Act (CEQA) through the promotion of public health through active transportation, and reduction of greenhouse gas emissions.

Although the majority of AVs are hybrids or zero-emission, manufacturers should move toward producing zero emission AVs only. Fleet level emission requirements should be coordinated and aligned with SB 1014.

Performance metrics should be developed alongside goals and should be calculated using sufficiently disaggregated data that companies are required to provide. This data should be provided to other government agencies so that the agencies can effectively evaluate and invest in transportation projects and develop policies that address the congestion, traffic safety, air quality,

greenhouse gas (GHG) emissions, and other transportation system performance issues in their jurisdiction. Active monitoring of should be included and clear enforcement guidelines established if goals are not met by vehicle manufacturers and fleet companies.

Data

As mentioned, one of MTC's core responsibilities is to develop and adopt a long-range plan every four years to guide transportation and housing development, and to prioritize investments. The most recent such plan is Plan Bay Area 2040.[1] MTC is now working on its next plan, which will guide the region's investments through 2050.

The long-range plan is informed by advanced statistical and econometric models that forecast future travel demand, patterns, and trends. MTC works to ensure its models are up-to-date and relevant.

Similar to TNC data, we request that trip data to be presented along a number of dimensions for important reasons:

- By an appropriate level of geography (e.g. census tract or zip code level), because traffic added to a congested area has a much larger congestion impact and infrastructural implication
- By hour and day of week, because additional traffic in peak hours has a much larger impact than additional traffic during non-peak hours
- We thank the Commission in requiring passenger occupancy (0, 1, 2, or 3+), because occupancy data is necessary to ascertain transportation system efficiency. We encourage the Commission to continue requiring this data
- We understanding that fare splitting is not yet authorized, but if it is authorized in the future, data by product type (pooled vs. non-pooled rides) would be important, because the two product types provide very different level-of-service (travel time, travel cost and vehicle occupancy) and are likely to complement and compete with transit ridership differently

Data that is sufficiently disaggregated is essential for MTC to effectively evaluate and invest in transportation projects and develop policies that address the congestion, traffic safety, air quality, greenhouse gas (GHG) emissions, and other transportation system performance issues in our region.

[1] https://www.planbayarea.org/

It is important to note that the third bullet above covers AV trips that have no passengers (for example, AV may be repositioning to pick up a new passenger, driving to a distant location for free parking, or cruising aimlessly in order to eliminate the need for parking). It is an emerging transportation issue that can potentially add substantial VMT and congestion to our system. Therefore, it is crucial that data about these zero passenger vehicle trips are collected.

Partnerships

In order for AVs to collect compensation, MTC strongly encourages the Commission to consider partnering with public agencies specializing in transportation planning, policy and programs to develop AV regulations and monitor compliance.

III. Conclusion

AVs will operate on public streets and impact congestion, air quality, greenhouse gas (GHG) emissions, and other measures of transportation system performance and Bay Area residents' quality of life. To obtain a deployment permit, the fleet operator should demonstrate that their AVs operate better than a good human driver, meet environmental and climate goals, are deployed equitably, are accessible and have high occupancy rates. State policies should ensure that AV policies and programs do not diminish the development of effective transportation and land use policies and plans, and are compliant with federal and state laws.

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Respectfully submitted,

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