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May 14, 2021

Via Email

Advanced Clean Cars
California Air Resources Board
1001 I Street
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Re: *Uber Technologies, Inc.'s Comments on Proposed Clean Miles Standard Regulation*

To Whom It May Concern,

Uber Technologies, Inc. (“Uber”) appreciates the California Air Resources Board’s (“CARB”) continued efforts to solicit feedback as it finalizes its Clean Miles Standard (“CMS”) regulation pursuant to SB 1014. As Uber has stressed repeatedly, compliance with the CMS Regulation’s eVMT and GHG targets will be difficult, if not impossible, without meaningful incentives and credit options and reasonable regulatory off-ramps to account for “unanticipated barriers” to compliance, especially when TNC drivers are expected to acquire a significant portion of the entire EV fleet available in California by 2030. Given the CMS regulation’s current silence on specific carrots to induce or support compliance efforts, and uncertainty surrounding the continued availability of incentives and funding beyond this context, the credit options in the proposed regulation remain the one opportunity to build in incentives consistent with the business model of transportation network companies (“TNCs”) and their limited ability to influence driver behavior necessary for electrification. Most importantly, these suggested revisions to the proposed regulation would help prevent negative impacts on low-income and moderate-income drivers.

For these reasons, in advance of the May 20, 2021 hearing on the CMS regulation, Uber submits these comments for CARB’s consideration to complement the proposed regulation with additional, targeted credit options to best leverage the sustainable mobility capabilities of TNC technology and the role TNCs play in the broader transportation ecosystem. We also respectfully recommend adding off-ramps that would excuse non-compliance and adjust GHG and eVMT targets in the event of various potential market-wide conditions, outside of TNCs’ control, that could hinder compliance in future years. The below comments are organized as follows:

- The Credit Options Available to TNCs Should Be Expanded
 - Credits for Micromobility and Transit Trips

- Credits for Investments in Charging Infrastructure
- Credits for Investments in ZEV and BEV Supply/Access
- Review of California Regulations Limiting Pooling on Trips Arranged by TNCs
- Review of the Bikeway and Sidewalk Infrastructure Credit
- The Deadline for the Initial Bi-Annual Compliance Plan Should Be Extended
- The Regulation Should Permit Year-to-Year Over- and Under-Compliance Carryover
- The CMS Regulation Should Contain Clear Off-ramps or Adjustments to Targets
- CARB's Assumptions Regarding TNC drivers' Adoption of EVs are Unrealistic

The Credit Options Available to TNCs Should Be Expanded

Uber maintains that the credit options in the revised CMS regulation remain inadequate. As an initial matter, optional credits contained in the regulation should apply not only to the GHG emissions targets, but also the annual eVMT targets. Leaving the current credit options applicable only to the GHG/PMT target will provide minimal utility, as meeting the eVMT targets will account for an overwhelming majority of compliance with the GHG targets. As CARB staff detailed in their Clean Miles Standard Workshop regarding Proposed Regulation Targets on November 19, 2020 (Workshop Presentation, pg. 11), the vast majority of the GHG/PMT must be met by the eVMT target in each compliance year. TNCs will need flexibility in order to meet the targets of this regulation in a manner that does not harm current and prospective drivers. In order to provide sufficient flexibility, and to encourage TNCs to experiment with new investments and interventions to achieve compliance, we strongly encourage CARB to allow credits to apply to the eVMT target as well as the GHG target.

Optional credits should be incorporated into the compliance calculation for eVMT as follows:

$$\%eVMT = (\Sigma VMT_{BEV+FCEV} + \Sigma VMT_{Credit}) / \Sigma VMT_{All\ Vehicles}$$

Moreover, while we are supportive of CARB's decision to include credit options for compliance, we request that CARB expand the available credit options, which fail to meaningfully incentivize conduct and investments that are more in line with the role that TNCs play in the broader mobility ecosystem and the specific needs of TNC drivers, and more impactful in reducing GHG emissions. Uber fully intends to make significant investments to help the state meet its ambitious goals, and credit options should be consistent with, and be aimed at spurring those efforts and innovations aimed at meeting the regulation's targets, without placing undue over-reliance on strict mandates, or increased costs to consumers, to do so. For instance, Uber has already committed \$800 million in resources, including direct subsidies and exclusive savings made available to drivers through partner organizations, to help hundreds of thousands of

drivers in the US, Canada and Europe make the shift to battery EVs over the next five years. Given the outsized share of EV adoption among drivers in California, we expect an outsized share of those resources to go to drivers in California.

Expansive credit options aimed at incentivizing such efforts, including those proposed below, are especially important in the earlier years of the regulation, when both CARB and regulated entities will gain clarity about the most effective tools for compliance. Conversely, limiting optional credits during the early days of the regulation not only reduces TNCs' ability to experiment with investments and interventions to determine how to best comply, it also narrows the list of stakeholders that may benefit. An inclusive approach will benefit the most potential stakeholders. For instance, many rural and low-income communities are "charging deserts" where a key electrification challenge is access to affordable charging infrastructure. These communities would benefit little from limiting optional credits to investments in bikeway and public transit infrastructure to reduce their GHG emissions. Furthermore, these communities may be resource limited in their ability to initiate these types of infrastructure projects—even with private investment from a TNC. But those communities may benefit immensely from interventions designed to increase access to EV charging infrastructure and affordable EV supply options. Allowing a flexible and expansive credit framework during the initial years of the regulation provides an innovative and no-regrets approach that benefits more stakeholders, drivers, and regulated entities.

Credits for Micromobility and Transit Trips

First, CARB should add an optional credit for direct micromobility or transit trips arranged on a TNC's platform, independent of whether a connected rideshare trip was also taken. TNCs could volunteer to provide some form of aggregated trip data to verify that a micromobility or transit trip booked on the TNC's application was actually completed. Since micromobility or transit trips arranged on a TNC's platform reasonably could be taken in lieu of a TNC trip in a significant proportion of circumstances (not to mention replace a trip in a private vehicle), both of these forms of transportation may be key levers for decreasing emissions per passenger mile.

For instance, in a [2019 survey](#) conducted by the City of Santa Monica of users of four shared mobility device platforms (including Bird, JUMP, Lime, and Lyft), respondents reported that 50 percent of their most recent shared mobility trips displaced a car trip (including drive alone, rideshare services, taxi, etc.). In Sacramento, less than six months after Uber launched JUMP, we saw the number of JUMP trips [surpass the number of rideshare trips](#) in the bike service area. In San Francisco, early [JUMP data](#) showed high bike adoption, replacing car trips via the Uber app, particularly during peak weekday traffic hours. Specifically, we saw a 10% decrease in Uber rideshare rides, while at the same time, the platform experienced a 15%

increase in utilization. Additionally, in a [survey](#) conducted by the San Francisco Municipal Transportation Agency, 42 percent of respondents indicated they would have taken a personal car or rideshare trip instead of a powered shared scooter had a scooter not been available on their last trip.

Similarly, transit trips in certain locations and over a certain distance are likely to have replaced a significant portion of trips in a rideshare vehicle or a private car. Therefore, a credit incentivizing TNCs to promote and complete transit and micromobility trips and to invest in substantial innovation in such offerings is warranted.

Proposed language for Section 2490.2(f):

(f) Credits for booked and completed micromobility or transit trips. TNCs may obtain optional CO₂ or eVMT credits from a micromobility or transit trip that is booked on a TNC's application and verified by the TNC through the submission of limited micromobility or transit trip data. TNCs may request optional CO₂ and eVMT credits for a micromobility or transit trip if the trip meets the following requirements:

- (1) The TNC passenger books and purchases a micromobility or transit trip through a TNC's application.
- (2) The transit or mobility trip traveled beyond a certain minimum distance (e.g. 0.25 miles).
- (3) The total credits for the trip shall be calculated using Equations 6 or 7.
- (4) Equation 6. CO₂ Credits.

$$\text{CO}_2 \text{ credit (gCO}_2\text{)} = \text{MT (mi)} \times \text{Fuel Efficiency (gCO}_2\text{/mi)}$$

Where,

MT is the total distance of the micromobility or transit trip.

Fuel Efficiency is the California fleet-wide average fuel economy for light duty vehicles in the reporting year.

- (5) Equation 7. eVMT Credits.

$$\text{eVMT credit (mile)} = \text{MT (mi)} \times \text{Multiplier}$$

Where,

MT is the total distance of the micromobility or transit trip (in miles).

Multiplier is a value between 1 and 2 to reflect benefit of promoting active mode of travel.

- (6) The TNC shall submit all information required under Section 2490.3(c)(9).

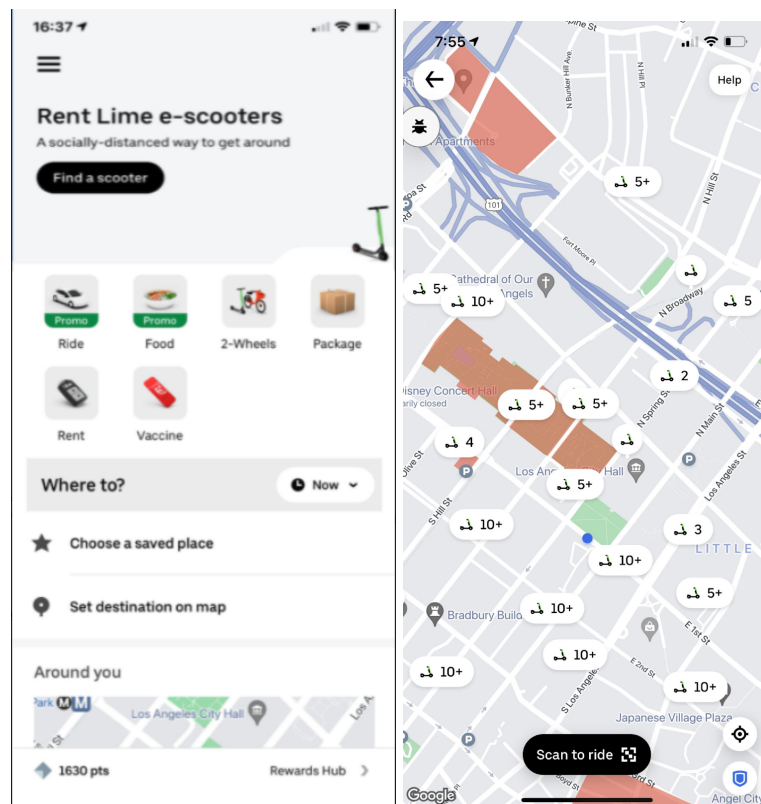
Proposed language for Section 2490.3(c)(9):

- (9) If the TNC chooses to request optional CO2 or eVMT credits as described in § 2490.2(g) for a given calendar year, the TNC shall submit:
- City of trip origin
 - Date and time of micromobility or transit trip start
 - Date and time of micromobility or transit trip end
 - Total number of miles traveled
 - Amount paid for micromobility or transit trip (before any incentives from the TNC)

Examples:

Micromobility trips:

While Uber no longer owns and operates bikes/scooters through the JUMP product, Uber currently partners with Lime to enable users to book scooter trips on the Uber platform. The credit described above would apply to those scooter trips, as well as to any booked trips on any micromobility products that Uber may unveil in the future.



Below is an example of how credit calculations would work for micromobility trips:

Assume 1 million micromobility trips were booked and completed through the Uber app in the target year ([JUMP](#) celebrated its 1 million trip mark after 1.5 years in San Francisco). Assume micromobility trip characteristics are comparable to pre-pandemic levels, and the average trip length is 2.6 miles (based on [JUMP data in San Francisco](#)). Assume passenger vehicle fuel efficiency is 26.7 miles/gallon (based on the [SB1014 2018 Base-year Emissions Inventory Report](#), pg. 29) and gasoline is the primary fuel hence its emission factor is 8,887 gCO₂/gallon (based on the [EPA's greenhouse gases equivalencies calculator](#)). Assume 20% of micromobility trips are taken during the rush hour period, making these trips eligible for a multiplier of 2. CO₂ credits and eVMT credits are calculated as follows:

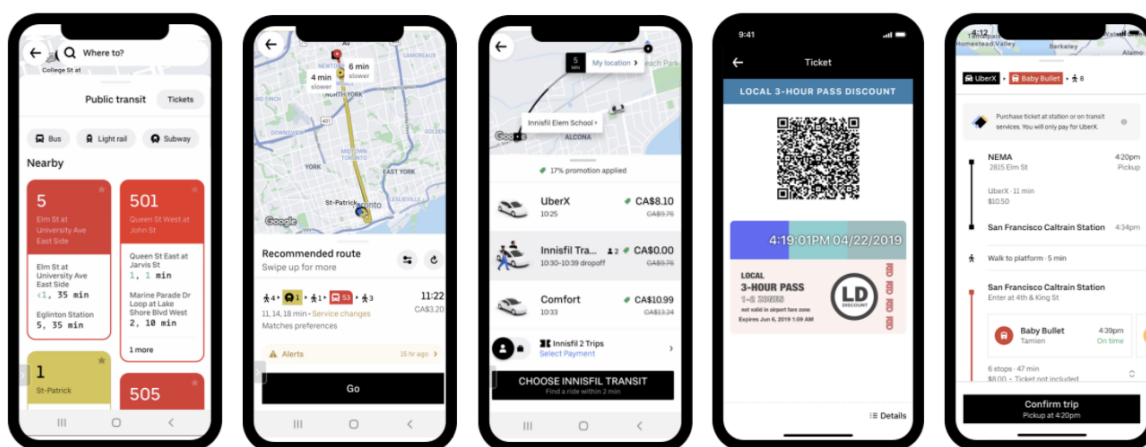
- CO₂ credit = 1,000,000 (trips) x 2.6 (miles/trip) / 26.7 (mile/gallon) x 8,887 (gCO₂/gallon)
= 865,400,749 grams of CO₂ (865 metric tons)

OR

- eVMT credit = 1,000,000 (trips) x 2.6 (miles/trip) x (0.2 x 2.0 + 0.8 x 1.0) (multiplier)
= 3.1 million miles

Transit trips:

[Uber is committed to investing in transit](#) and developing products that have made it easier to take transit trips through the Uber app:



Transit home

A dedicated home for public transit in the Uber app

Already available in Montreal, GTA, Vancouver

Journey Planning

Provide access to public transit so riders can make an informed transportation decision

Agency programs

Support for vouchers, agency subsidies, paratransit and other agency specific programs

Ticketing

Ensure riders can simply purchase public transit tickets at no additional cost

Uber + Transit

Connecting Uber rideshare and public transit in one journey

Though in-app transit ticketing is not currently available in California markets, we anticipate this being a widely available option in future years, and once the product is launched in the state, the credits described above would apply on trips for which tickets are purchased through the Uber app. Below is an example of how those credit calculations would work:

According to the FHWA's [NHTS 2017 Survey](#), there were over 1 billion transit trips in the state of California in 2017, with an average distance of 7.6 - 14.7 miles. Assume 1% of those transit trips are booked through the Uber app, and the average distance traveled per trip is estimated as 10 miles. Assume passenger vehicle fuel efficiency is 26.7 miles/gallon (based on the [SB1014 2018 Base-year Emissions Inventory Report](#), pg. 29) and gasoline is the primary fuel hence its emission factor is 8,887 gCO₂/gallon (based on the [EPA's greenhouse gases equivalencies calculator](#)). Assume 20% of transit trips are taken during the rush hour period, making these trips eligible for a multiplier of 2. CO₂ credits and eVMT credits are calculated as follows:

$$\begin{aligned}\text{CO}_2 \text{ credit} &= 10,000,000 \text{ (trips)} \times 10 \text{ (miles/trip)} / 26.7 \text{ (miles/gallon)} \times 8,887 \text{ (gCO}_2\text{/gallon)} \\ &= 33,284,644,194 \text{ grams of CO}_2 \text{ (33,000 metric tons)}\end{aligned}$$

OR

$$\begin{aligned}\text{eVMT credit} &= 10,000,000 \text{ (trips)} \times 10 \text{ (miles/trip)} \times (0.2 \times 2.0 + 0.8 \times 1.0) \text{ (multiplier)} \\ &= 120 \text{ million miles}\end{aligned}$$

Credits for Investments in Charging Infrastructure

Second, discussions with drivers, equity advocates, academics, nonprofits, and other experts cite charging availability, downtime due to charging requirements (including commute, access and plug-in time), and charging ‘deserts’ as a major hurdle to TNC and low-income driver adoption of EVs. Additionally, [our analysis](#) and assessments by others (e.g. [CEC](#), [NESCAUM](#), [RMI](#)) indicate that current EV infrastructure networks lack coverage in areas where TNC drivers live and work and that efforts to support drivers’ EVI needs can increase charging access for lower income communities. Therefore, applying CARB’s logic that CMS credits raise revenue for public policy initiatives, CARB should adopt credits for TNCs that make interventions with charging providers to provide drivers with below-market-rate access to charging infrastructure. At least some of these interventions would also have the benefit of creating public charging infrastructure—robust charging networks to address the needs of part- and full-time commercial drivers, not just rideshare drivers but also those in taxi, urban delivery, and transportation fleets.

Interventions may take many forms. For example, TNCs may enter into commercial arrangements with third-party providers of charging infrastructure to support affordable

fast-charging options in urban areas or overnight charging solutions for drivers in underserved neighborhoods. To achieve increased access and below-market charging rates for drivers using TNC apps, TNCs will need to find ways to “put skin in the game” through contributions including risk-sharing arrangements with charging providers (e.g. offtake agreements, utilization guarantees) and direct incentives to drivers. Especially in the early years of the CMS program, an inclusive optional credits framework that refrains from prescriptive approaches or constraining business models will spur TNCs to find innovative solutions with charging providers that expand access to charging for drivers, especially lower income drivers and those living in areas underserved by EV charging networks.

Proposed language for Section 2490.2(g):

- (g) Credits from investment in EV charging infrastructure projects. TNCs may request optional CO₂ or eVMT credits as calculated using Equations 8 or 9 through investments in EV charging infrastructure. Credits may be requested for the number of years the project is operational if the project meets the following requirements:
- (1) The TNC has a commercial arrangement with a charging provider supported by contributions from TNC in the form of risk sharing or driver incentives (e.g. an offtake or a utilization guarantee program, direct incentives for drivers).
 - (2) The TNC shall submit all information required under Section 2490.3(c)(10).
 - (3) The credit to be applied shall be calculated using Equation 8 or Equation 9.
 - (4) Equation 8. eVMT Credits.

$$\text{eVMT credit} = \text{Electricity} / \text{Energy Efficiency} \times \text{Underserved community multiplier} \times \text{Attribution factor}$$

Where,

Electricity is the electricity charged through the invested infrastructure (kwh)

Energy Efficiency is the EV energy efficiency (kWh/mile).

Underserved community multiplier is a factor to be determined by CARB, greater than one (e.g. 3), to be applied whenever a TNC’s contribution supports driver charging in a disadvantaged community or a low-income community.

For the purposes of this regulation, disadvantaged community and low-income communities are those communities identified or defined pursuant to SB 535 and AB 1550 respectively.

Attribution factor is a value of 1 or less that gives credit to TNC's level of investment in the intervention, and is best assigned according to the average discount participating drivers receive from charging providers, for equipment, installation or electricity pricing, from market rate.

(5) Equation 9. CO2 Credits.

CO2 credits = Electricity / Energy Efficiency / Fuel Efficiency x Emission Factor x
Underserved community multiplier X Attribution factor

Where,

Electricity is the electricity charged through the invested infrastructure (kwh).

Energy Efficiency is the EV energy efficiency (kWh/mile).

Fuel Efficiency is California fleet-wide average fuel economy for light duty vehicles in the reporting year (Miles/Gallon).

Emission Factor is the CO2 emissions per unit of fossil fuel (gCO2/gallon).

Underserved community multiplier is a factor to be determined by CARB, greater than one (e.g. 3), to be applied whenever a TNC's contribution supports drivers' charging in a disadvantaged community or a low-income community.

For the purposes of this regulation, disadvantaged community and low-income communities are those communities identified or defined pursuant to SB 535 and AB 1550 respectively.

Attribution factor is a value of 1 or less that gives credit to TNC's level of investment in the intervention, and is best assigned according to the average discount participating drivers receive from charging providers, for equipment, installation or electricity pricing, from market rate.

Proposed language for Section 2490.3(c)(10):

- (10) If the TNC chooses to request optional CO2 or eVMT credits as described in § 2490.2(g) for a given calendar year, the TNC shall submit:
- i. A letter signed by the TNC and participating charging provider(s) confirming a commercial relationship for the purposes of supporting driver charging and including the following information:
 - a. The start and end date of charging intervention for drivers
 - b. The monetary value of contributions from both parties

- c. The type, number, and location of charging installations supporting the agreement, aggregated to the census tract level (to determine SB 535 and AB 1550 applicability)
- d. The electricity consumed by participating drivers, in kWh, over the reporting period

Examples:

Assume Uber partners with an organization which plans to build or make available ten level 3 (50 kW) public chargers to drivers at a below-market charging rates. Uber contributes to the project through a risk sharing arrangement, such as a utilization guarantee and provides information to drivers including the location of chargers and discount rates offered by the charging provider. During the annual reporting period, data provided to Uber from the charging provider demonstrates participating drivers consumed 1,000 MWh. Assume an electric vehicle's energy efficiency is 29kWh/100 miles (based on [the latest Chevrolet Bolt](#)), passenger vehicle fuel efficiency is 26.7 miles/gallon (based on the [SB1014 2018 Base-year Emissions Inventory Report](#), pg. 29) and the emissions factor is 8,887 gCO₂/gallon assuming gasoline as the primary fuel (based on the [EPA's greenhouse gases equivalencies calculator](#)). Assume 3 out of 10 chargers are located in underserved communities. Participating drivers gain access to the ten level 3 chargers, throughout the duration of the program, at a 25% discount from market rate pricing. CO₂ credits and eVMT credits are calculated as follows:

- $$\text{eVMT credit} = 1,000,000 \text{ (kWh)} / 0.29 \text{ (kWh/miles)} \times (0.7 \times 1 + 0.3 \times 3) \text{ (underserved community multiplier)} \times 25\% \text{ (attribution factor)}$$
$$= 1,379,310 \text{ miles}$$

OR

- $$\text{CO}_2 \text{ credits} = 1,000,000 \text{ (kWh)} / 0.29 \text{ (kWh/miles)} / 26.7 \text{ (mile/gallon)} \times 8,887 \text{ (gCO}_2\text{/gallon)} \times (0.7 \times 1 + 0.3 \times 3) \text{ (multiplier)} \times 25\% \text{ (attribution factor)}$$
$$= 459,098,540 \text{ gCO}_2$$

Credits for Investments in ZEV and BEV Supply/Access

Third, [our analysis](#) and assessments by others (e.g. [UC Davis](#), [UC Davis ITS](#), [ICCT](#)), demonstrates that acquisition and operational cost premiums remain the primary barriers to BEV uptake and TCO parity (with ICE vehicle equivalent) for drivers using TNC apps. Therefore, CARB should adopt an optional credit, particularly in earlier years of compliance, for investments in direct subsidies or incentives that support commercial relationships with vehicle supply providers who extend below-market ZEV or BEV offerings to TNC drivers.

As CARB is aware, TNCs are not able to directly purchase vehicles for drivers, nor ensure retention of current vehicles on the platform, and short of creating strict platform restrictions for non-ZEV vehicles, TNCs are limited in their abilities to encourage ZEV adoption. It's important to recognize that the full cost of drivers transitioning to EVs is an ever-moving target because there is naturally consistent turnover among drivers using the earning opportunity circumstantially, and, as studies show¹, the vast majority of drivers spend less than 25 hours a week on rideshare apps. And, according to [a study by researchers from UC Davis](#), based on the largest survey of EV drivers on TNC apps to date, 60% of EV drivers spend less than 30 hours a week on a rideshare app. Furthermore, it's worth noting that most TNC drivers who procure a vehicle, even if primarily for ridesharing purposes, often use that same vehicle with multiple gig economy apps and for personal use. Therefore, interventions designed to facilitate and encourage ZEV adoption by increasing access for drivers at below-market rates should warrant an optional credit, particularly in the early years of the CMS program. Such a credit would be consistent with and promote the goals of SB 1014, which requires that the regulation "ensure minimal negative impact on low-income and moderate-income drivers." Moreover, credits incentivizing these interventions would further the State's zero-emissions goals, leading to outsized public benefits in the areas of climate change and public health.²

To achieve increased access and below-market rates for ZEV supply options for drivers using TNC apps, TNCs will need to find ways to "put skin in the game" through contributions including risk-sharing arrangements with ZEV supply providers (e.g. utilization guarantees) and direct incentives to drivers. Especially in the early years of the CMS program, an optional credits framework that refrains from prescriptive approaches or constraining business models will spur TNCs to find innovative solutions with ZEV supply providers that expand drivers' access to vehicles, especially for lower income drivers and those living in areas underserved by ZEV supply.

Proposed Language for Section 2490.2(h):

- (h) Credits from investment in EV supply projects. TNCs may request optional CO₂ or eVMT credits as calculated using Equations 10 or 11 through investments in programs designed to expand drivers' access to ZEVs. Credits may be requested for the number of years the project is operational if the project meets the following requirements:

¹ <https://medium.com/uber-under-the-hood/which-drivers-do-the-most-trips-9c475e99e071>.

² Research from UC Davis and Uber shows that when rideshare drivers make a fair transition to electric vehicles, communities can realize three to four times greater emissions savings compared to when average car owners switch. See Jenn, A. Emissions benefits of electric vehicles in Uber and Lyft ride-hailing services. *Nat Energy* 5, 520–525 (2020), available at <https://www.nature.com/articles/s41560-020-0632-7>; SPARK! Partnering to electrify in Europe, available at <https://www.uber.com/us/en/about/reports/spark-partnering-to-electrify-europe/>.

- (1) The TNC has a commercial relationship with a participating ZEV supply provider for the purposes of supporting driver access to ZEVs.
- (2) The TNC shall submit all information required under Section 2490.3(c)(11).
- (3) The credit to be applied shall be calculated using Equations 10 or 11.
- (4) Equation 10. eVMT Credits.

$$\text{eVMT credit} = \text{eVMT} \times \text{Underserved community multiplier} \times \text{Attribution factor}$$

Where,

eVMT is the total miles on the TNC app completed by drivers using the ZEVs provided in the program over the reporting period

Underserved community multiplier is a factor to be determined by CARB, greater than one (e.g. 3), to be applied whenever a TNC's contribution supports drivers living in a disadvantaged community or a low-income community.

For the purposes of this regulation, disadvantaged community and low-income communities are those communities identified or defined pursuant to SB 535 and AB 1550 respectively.

Attribution factor is a value of 1 or less that gives credit to TNC's level of investment in the intervention, and is best assigned according to the average discount participating drivers receive from charging providers, for equipment, installation or electricity pricing, from market rate.

- (5) Equation 11. CO2 Credits.

$$\text{CO2 credits} = \text{eVMT} \times \text{Emission Factor} \times \text{Underserved community multiplier} \times \text{Attribution factor}$$

Where,

eVMT is the total miles completed by drivers using the ZEVs provided in the program over the reporting period.

Emission Factor is the CO2 emissions per unit of fossil fuel (gCO2/gallon).

Underserved community multiplier is a factor to be determined by CARB, greater than one (e.g. 3), to be applied whenever a TNC's contribution supports drivers' charging in a disadvantaged community or a low-income community.

For the purposes of this regulation, disadvantaged community and low-income communities are those communities identified or defined pursuant to SB 535 and AB 1550 respectively.

Attribution factor is a value of 1 or less that gives credit to TNC's level of investment in the intervention, and is best assigned according to the average discount participating drivers receive from charging providers, for equipment, installation or electricity pricing, from market rate.

Proposed language for Section 2490.3(c)(11):

- (11) If the TNC chooses to request optional CO₂ or eVMT credits as described in § 2490.2(h) for a given calendar year, the TNC shall submit:
- i. A letter signed by the TNC and participating ZEV supply provider(s) confirming a commercial relationship for the purposes of supporting driver access to ZEVs and including the following information:
 - (a) The start and end date of ZEV supply intervention for drivers
 - (b) The monetary value of contributions from both parties
 - (c) The type, number, and location of ZEVs supporting the agreement, aggregated to city or region level
 - (d) The total number of drivers participating in the program and number and census tract location of drivers' home locations, for those participating drivers who live in locations defined by SB 535 or AB 1550 as underserved areas
 - (e) Total eVMT logged on ZEVs provided to drivers participating in the program over the reporting period

Example:

Assume Uber partners with an organization which plans to make available 25 ZEVs to drivers at a below market charging rates. Uber contributes to the project through a risk sharing arrangement, such as a utilization guarantee and direct incentives to drivers. During the annual reporting period, data provided to Uber from the charging provider demonstrates participating drivers logged 1,000,000 eVMT. Assume passenger vehicle fuel efficiency is 26.7 miles/gallon (based on the [SB1014 2018 Base-year Emissions Inventory Report](#), pg. 29) and the emissions factor is 8,887 gCO₂/gallon of gasoline as the primary fuel (based on the [EPA's greenhouse gases equivalencies calculator](#)). Assume 100 drivers participated in the program, with 25 of those reporting home locations in underserved communities. Participating drivers gained access to the 25 ZEVs, throughout the duration of the program, at a 40% discount from market rate pricing. CO₂ credits and eVMT credits are calculated as follows:

- $\text{eVMT credit} = 1,000,000 \text{ eVMT} \times (0.75 \times 1 + 0.25 \times 3) \text{ (underserved community multiplier)} \times 40\% \text{ (attribution factor)}$
 $= 600,000 \text{ miles}$

OR

- $\text{CO}_2 \text{ credits} = 1,000,000 \text{ eVMT} / 26.7 \text{ (mile/gallon)} \times 8,887 \text{ (gCO}_2\text{/gallon)} \times (0.75 \times 1 + 0.25 \times 3) \text{ (multiplier)} \times 40\% \text{ (attribution factor)}$
 $= 199,707,846 \text{ gCO}_2$

Review of California Regulations Limiting Pooling on Trips Arranged by TNCs

Fourth, as TNCs scope out plans for compliance with the aggressive GHG reduction targets as proposed, reimagination of the product offerings may be required, including, but not limited, to electrification. Pooling is an essential tool in maximizing the overall impact of ZEV conversion, but is inherently limited by current passenger vehicle offerings. Regulatory conformity for adding new products such as high occupancy vehicles in urban cores, on heavily utilized routes, and for special events that bring heavy ingress/egress of TNC customers may be better served under this policy via private, or public, high occupancy vehicles such as shuttles or buses available through TNC apps. Existing barriers to integration of these additional modes should be reviewed in light of the clear benefits in reaching the goals of this policy.

Review of the Bikeway and Sidewalk Infrastructure Credit

Finally, Uber believes that the existing credit options can be improved or clarified. The Bikeway and Sidewalk Infrastructure Projects Credit can be clarified as to (a) whether the credit can be taken on a yearly basis (as the inclusion of project lifespan in the denominator implies), and (b) what type of investment would fall into the bar on “any financial or other obligation of the TNC.” For example, if a TNC’s investment is rolling into some kind of public bond structure, such as a public-private partnership, community finance district, JPA, etc. (which probably has a logical application for such an investment), it is unclear whether TNCs will be able to benefit from public bond tax treatment/rates. Additionally, the Bikeway Credit uses the [Federal Highway Administration cost-effectiveness estimate for Bicycle and Pedestrian Project](#). The calculation assumes trip-shifting and not a wider behavioral change that may incentivize shift from passenger vehicles. However, [CARB’s rationale](#) states that the purpose of the Bikeway Credit is to shift overall behavior and transportation patterns, producing collateral benefits beyond FHWA’s trip cost-effectiveness estimate. As such, bikeway and sidewalk infrastructure investment should have a higher coefficient than described in Table 52.

The Deadline for the Initial Bi-Annual Compliance Plan Should Be Extended

Because finalization of the CMS regulation and the eventual CPUC rulemaking implementing the regulation has been delayed, Uber requests that CARB consider a modest extension of the deadline for TNCs' initial biennial compliance plan under Section 2490.3(b). Specifically, CARB should consider extending the deadline for the first biennial compliance plan only, which is due by January 1, 2022 under the current version of the proposed regulation, by at least six months, until at least June 1, 2022. A six-month extension will allow TNCs sufficient time to prepare their initial compliance plans once the details of the CMS regulation have been cemented, while future biennial compliance plans can remain on the originally proposed schedule (January 1, 2024, January 1, 2026, and so on).

The Regulation Should Permit Year-to-Year Over- and Under-Compliance Carryover

We implore CARB to consider the addition of a year-to-year carryover of both over- and under-compliance, as credits or debits, respectively, for both the GHG emissions targets and the eVMT targets. Currently, Section 2490.1(d) of the proposed CMS regulation permits a TNC to use over-compliance credits toward the GHG emissions target in any of the subsequent three calendar years. Providing TNCs the ability to carry forward both credits or debits to be applied to both the GHG and eVMT targets in subsequent years, at least for the initial years of compliance (*i.e.*, 2022-2025), will encourage TNCs to innovate and experiment with different mechanisms to achieve compliance, including incentivizing and encouraging EV adoption among drivers.

The CMS Regulation Should Contain Clear Off-ramps or Adjustments to Targets

As explained in Uber's previous comments, the CMS regulation should be revised to contain explicit regulatory flexibility to account for various circumstances in which TNCs' compliance with established targets may become infeasible. Consistent with the intent and provisions within the enacting statute under SB 1014 (Skinner, 2018), the CMS regulation should account for "unanticipated barriers" that may hinder TNCs' ability to expand the use of ZEVs and meet the annual compliance targets for both GHGs and eVMT. Additionally, the statute provided for a review of available data related to those barriers "no less often than every two-years." More specifically, Public Utilities Code Section 5450(b)(4) provided the following:

The board shall delay adoption, and the commission shall delay implementation, of the targets and goals pursuant to paragraph (2) if the board or commission finds that unanticipated barriers exist to expanding the usage of zero-emission vehicles by transportation network companies. The board and commission shall review the available data related to barriers to expanding the usage of zero-emission vehicles by transportation network companies no less often than every two years,

including data relative to current and future electric transportation adoption rates and charging infrastructure utilization rates.

This language clearly acknowledged that circumstances may arise that warrant some flexibility in the regulation to account for such barriers. While Uber does not propose the regulation be delayed as provided for in the statute, we urge CARB to include explicit regulatory flexibility to address issues of non-compliance on account of such barriers that are outside of the realm of TNCs' control. There may be multiple mechanisms by which to incorporate such flexibility, such as establishing clear criteria for when non-compliance may be waived or including provisions allowing for adjustment in the GHG and eVMT compliance targets or mechanisms to provide credit for a TNC's good faith efforts to incentivize uptake of EVs for this purpose. As discussed in Uber's previous comments, there may be an array of industry-wide circumstances beyond the control of TNCs or TNC drivers that impact the mobility habits of Californians or the adoption of EV technology among TNC operators. Further clarity on this aspect of the regulation will enable more robust compliance plans, reflective of what TNCs can and cannot control, and better guide TNCs' own investments and incentive schemes driven by this policy. Accordingly, Uber proposes such flexibility be added to Section 2490.1 of the current version of the draft regulation as follows:

The GHG targets and eVMT targets provided in this regulation shall be adjusted, and a TNC's non-compliance shall be waived, if such non-compliance results from unanticipated market-wide barriers beyond the TNC's control, including but not limited to:

- (1) Lower EV adoption among TNC drivers than projected as a result of economic burdens and a lack of availability or access to meaningful incentives;
- (2) Consumer market EV supply lower than projected, according to CARB modeling, in any year through 2030 resulting in a supply shortfall that may skew the ratio of TNC operator vs. non-TNC operator supply adoption;
- (3) Technological delays or other circumstances causing the unavailability of low-cost charging options for TNC drivers;
- (4) Delays in the achievement of TCO parity between BEVs and the best used hybrids or ICE vehicles on the market; or
- (5) An emergency or other circumstances resulting in an unforeseen decline in demand for rideshare, including the number of shared or pooled trips, or an increase in personal car use.

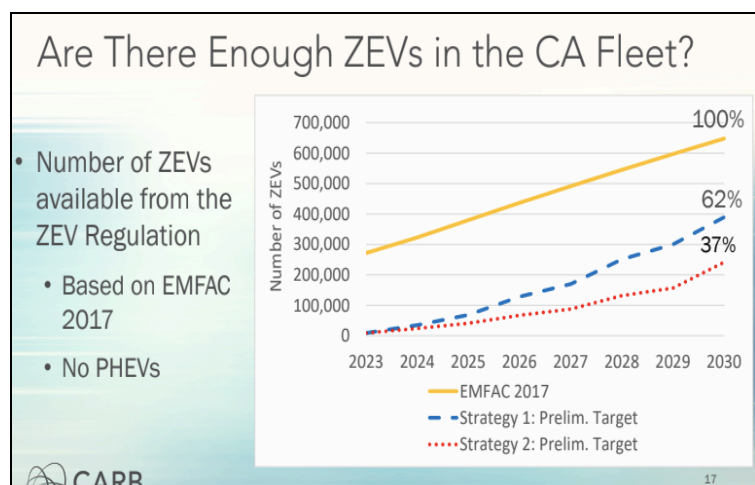
Not only does building in this sort of flexibility around these (and potentially other) unanticipated market-wide barriers address challenges TNCs may experience as a result of circumstances outside of their control, but it also ensures a backstop for low- to moderate-income TNC drivers who may be economically impacted. This provision of flexibility

is consistent with CARB's own priorities and guiding principles for its regulation development—to “minimize burden to low- and moderate-income drivers.” Further, it provides clear barrier criteria so as to avoid any gaming of the system, a concern noted by CARB staff.

Finally, also consistent with SB 1014, we urge CARB to include within the regulation renewed calculations of TCO on at least an annual basis. This reflects the importance of understanding the potential delays that may occur in achieving TCO parity, and the important factor it plays in a TNC's ability to ensure compliance with the regulation's targets.

CARB's Assumptions Regarding TNC Drivers' Adoption of EVs are Unrealistic

Assuming the EMFAC model (provided by CARB) has correctly predicted the number of EVs available each year through 2030, there should be approximately 650,000 EVs available in 2030. Given the proposed targets, this means that TNC drivers will have to acquire 50%+ of the entire available fleet of EVs in the state of California by 2030 despite making up less than 1% of the total California population. Assuming that over 50% of the state's EV supply will be adopted by less than 1% of the population is not realistic, even with massive subsidies.



Alternatively, by 2030, TNCs will have to attract half of the State's EV owners to supply all of the mobility demanded on their apps. TNCs' ability to market to, attract and retain 50% of the State's EVs from owners is similarly unrealistic, given the demographic and income differences demonstrated in CARB's own analysis between average EV owners today and average TNC drivers.

This disproportionate ratio means that the lower and moderate income TNC driver population will be forced to compete with wealthier California residents for an overwhelming percentage of the EV inventory. This will likely result in two outcomes. First, the price of EVs in the primary market may increase given the increased demand competition. Second, TNC operators will be forced to look at a nascent EV secondary market where supply is generally less reliable, of lower performance (e.g. battery life and range, passenger and trunk capacity), less supported by subsidies, and carries a higher TCO than used hybrids.

This insurmountable ownership distribution imbalance, skewed heavily towards TNC operators, also introduces another argument for “off ramps,” as discussed above. If there are not 650,000 EVs available by 2030 and eVMT targets do not change, then TNC operators will have to purchase an *even larger* percentage of the total EV supply. If there are less than 650,000 EVs available by 2030 in California (or less than the projected number of EVs available any year up to 2030), then targets must be adjusted in conjunction with the supply shortfall to account for the ratio of TNC operator vs. Non-TNC operator supply adoption.

Respectfully submitted,

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