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Client Alert Commentary

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CARB Steers Clean Miles Standard Toward Formal Rulemaking

The agency has further strengthened electrification targets and provided additional details on compliance options for Transportation Network Companies.

The California Air Resources Board (CARB) is developing the Clean Miles Standard and Incentive Program (Clean Miles Standard), a first-of-its kind regulation designed to reduce greenhouse gas (GHG) emissions from ride-sharing vehicles and increase the use of zero-emission vehicles (ZEVs). CARB staff presented updates to the regulation at a November 19, 2020, workshop, and stated that in revising the % eVMT Target and the GHG Emission Target they considered three factors: (1) Governor Newsom's Executive Order calling for 100% of in-state sales of new passenger cars and trucks to be zero-emission by 2035;[1] (2) Uber's and Lyft's recent commitments to 100% EV vehicles on their platforms; and (3) equity considerations.

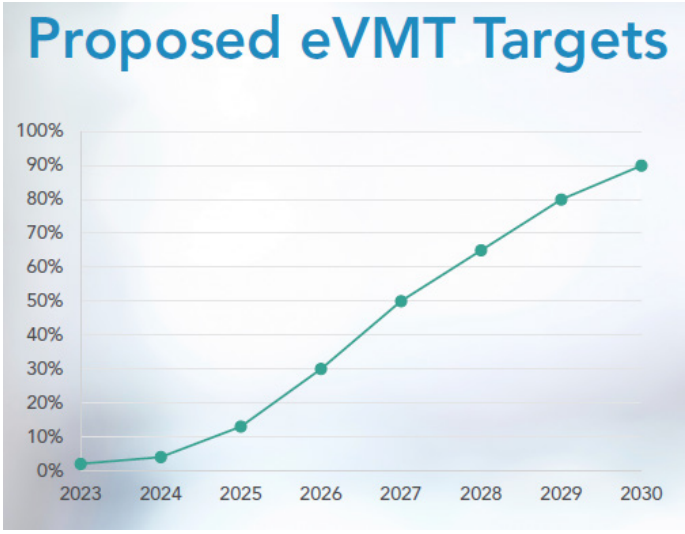
Latham & Watkins reported on the foundation of the regulation, Senate Bill 1014, and the design of CARB's proposed regulation in a November 24, 2020, *Client Alert*. This *Client Alert* describes the most recently proposed targets and CARB's Draft Regulatory Order (the Order).

% eVMT Target

The % eVMT Target sets a requirement for the percent of Transportation Network Company (TNC) vehicle miles traveled (VMT) that must be driven by a ZEV (eVMT). To set the % eVMT Target, CARB developed a cost model to estimate the rate at which TNC drivers are likely to switch from internal combustion engine (ICE) vehicles to battery electric vehicles (BEVs).[2] CARB's cost model includes factors such as the cost of gasoline, the cost of electricity, and the type of charging drivers will use, and amortizes the cost of installing a residential Level 2 (L2) charger.

The cost model also includes a variable called the "BEV Barrier," which is meant to reflect market challenges for a driver making the switch to a BEV. The cost model assumes that the BEV Barrier can be overcome when the driver of a BEV not only breaks even, but also saves US$50 per week in 2020, decreasing linearly to US$0 per week in 2030. Effectively, CARB is assuming that challenges related to BEV adoption such as locating chargers and accounting for time to charge will be addressed, and cost parity between ZEVs and ICE passenger vehicles will be achieved, by 2030.

Based on the cost modeling, CARB has presented a preliminary % eVMT Target of 2% in 2023, a figure that increases to 90% in 2030.[3] This target assumes that 43% of TNC vehicles will switch to ZEVs by 2030.[4] CARB staff reported that the target of 90% eVMT assumes that CARB's Advanced Clean Cars Regulation[5] will require enough new ZEVs to be available in the new and used vehicle markets to reach this target, and that the Clean Miles Standard is not assumed to drive new-vehicle sales.



Cost Modeling Assumptions on Charging Methods

The cost modeling used to set the % eVMT Target includes assumptions about how drivers who switch to ZEVs will charge their vehicles. CARB assumes that 50% of drivers will use L2 charging at their residence, and 50% will use higher-level fast charging (DCFC) available to the public, and maintains this assumed split in all modeled years. In previous iterations of the draft regulatory concept, the split between L2 and DCFC in the cost model favored DCFC, rising to 90% DCFC by 2026.

The reason for this change in cost modeling assumptions was not explained at the November 2020 workshop. CARB had stated previously that one reason to assume higher reliance on DCFC was that many TNC drivers live in multi-family housing and/or are low-income, and likely do not have access to L2 charging at home. However, the earlier cost model assumed widespread deployment of DCFC in the near term, and it's possible that concerns about barriers to charging infrastructure installation led to scaling back that assumption. Nonetheless, supporting the assumption that 50% of TNC vehicles will use DCFC and 50% will use L2 charging will require significant infrastructure investments, and may create an incentive for partnerships between TNCs, EV charging companies, and vehicle manufacturers.

GHG Emission Targets

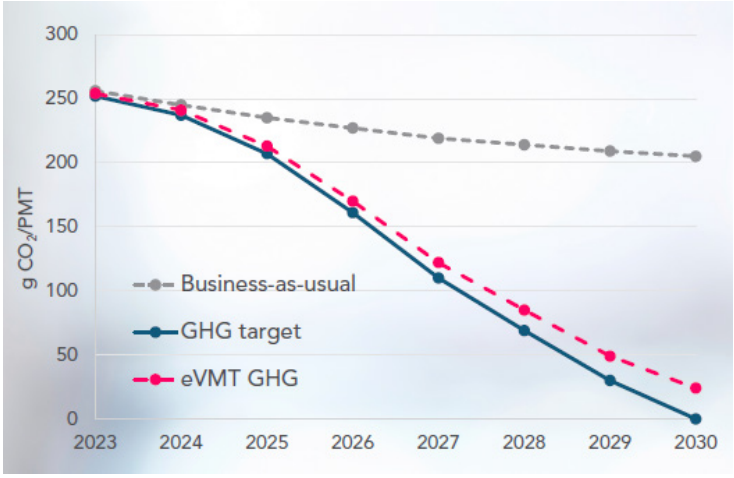
The GHG Emission Targets aim to reduce GHG emissions from TNC vehicles by accounting for *all* vehicle miles traveled and the carbon dioxide (CO_2) emissions of a TNC vehicle, compared to the passenger miles traveled (PMT) and occupancy of the vehicle.

The equation to determine TNC GHG emissions is shown below.[6] According to the Order, total VMT for P1, P2, and P3 in the numerator excludes eVMT driven by ZEVs. The CO_2 factor is determined based on vehicle model year and type (e.g., gasoline, hybrid, plug-in hybrid) and is provided in Tables 2 and 3 of the Order.

$$\frac{\text{Grams } CO_2}{\text{PMT}} = \frac{\Sigma(\text{VMT}_{P1,P2,P3} \times CO_2 \text{ factor})_{Trip}}{\Sigma(\text{VMT}_{P3,all} \times \text{occupancy})_{Trip}}$$

Source: Draft Regulatory Order, Equation 1

At the November 2020 workshop, CARB staff introduced the updated GHG Emission Targets, which are more aggressive than the targets presented at a workshop CARB held in July 2020. Notably, CARB introduced Proposed GHG Emission Targets that decrease over the next 10 years and ultimately reach ***zero*** by 2030.



Source: CARB November 2020 Workshop Presentation at 11

In the early years of the regulation, nearly all of the reductions in the GHG Emission Target can be attributed to vehicle electrification consistent with the % eVMT Target (the pink line in the chart above). Over time, the GHG Emission Targets will require additional reductions beyond what would be achieved by compliance with the % eVMT Target alone. This "gap" between the two targets is small in the early years and increases over time, in order to allow TNCs time to develop other compliance strategies to meet the lower GHG Emission Targets.

CARB has identified four primary means for TNCs to close the gap: increasing vehicle occupancy, banking credits from over-compliance, reducing deadhead miles, and earning optional CO_2 credits.

Occupancy

One way for a TNC to reduce its GHG emissions and close the gap is by increasing ride-pooling, which increases the occupancy of the TNC vehicle per ride (in the denominator of Equation 1). For purposes of the regulation, occupancy is determined using "compliance occupancy values" based on whether a ride was "pooled" or not, rather than requiring TNCs to track the actual number of passengers per ride. For non-pooled rides and pool-requested, unmatched[7] rides, CARB proposes a compliance occupancy value of 1.5. For pool-matched rides, CARB proposes a compliance occupancy value of 2.5.[8] CARB staff has previously explained that these values were reached based on the 2018 TNC data used to establish the regulatory baselines.

However, given the COVID-19 pandemic, CARB recognizes that TNCs have ceased ride-pooling due to social distancing requirements. At the July 2020 workshop, CARB staff discussed assumptions regarding TNC occupancy levels over time, including that TNC occupancy will rebound to 2018 levels by 2023, and that ride-pooling will increase by 2030. Given the uncertainty in ride-pooling, increasing vehicle occupancy is one of several options to close the gap, but not required to achieve compliance with the GHG Emission Target.

Over-Compliance Credits

Over-compliance with the GHG Emission Target will earn TNC credits for the difference.[9] Credits will be earned for the difference between a TNC's GHG emissions in grams of CO_2 per PMT, calculated according to Equation 1 (above), and the GHG Emission Target for a given year, as shown in Table 1 of the Order. These credits for lower-than-required GHG emissions may be "banked" for up to three years after they are earned, and then used for compliance with the GHG Emission Target in any of those three years.

Reducing Deadhead Miles

Deadhead miles are the miles driven in P1 (when a driver is waiting for a ride request) and P2 (when a driver is en route to pick up a passenger). CARB is not setting any targets or requirements to reduce deadhead miles over time, but CARB staff has noted that reducing deadhead miles would help a TNC achieve compliance with the GHG Emission Target. Reducing deadhead miles will reduce total miles traveled (in the numerator of Equation 1) and therefore also lower the GHG emissions. Any actions a TNC can take to reduce VMT in the P1 and P2 periods will help it close the gap with the GHG Emission Target.

Optional CO_2 Credits

Another potential avenue for reducing GHG emissions and close the gap is to earn "optional CO_2 credits,"[10] which CARB is designing to comply with SB 1014's requirement that the regulation include "facilitation of walking, biking, and other modes of active or zero-emission transportation." These credits are directly subtracted from the CO_2 emissions in the numerator of the GHG emissions equation, as shown in Equation 3 of the Order:

$$\frac{\text{Grams } CO_2}{\text{PMT}} = \frac{\Sigma\left(\text{VMT}_{P1,P2,P3} \times CO_2 \text{ factor}\right)_{\text{Trip}} - CO_2 \; credit}{\Sigma\left(\text{VMT}_{\text{P3,All}} \times \text{occupancy}\right)_{\text{Trip}}}$$

At the November 2020 workshop, CARB staff introduced three potential options to account for active transportation and for TNCs to earn credits toward compliance with the GHG Emission Target.

Option 1: Investments in bikeways and sidewalks

To qualify for Option 1, the investment must be in bikeway or sidewalk infrastructure projects in an existing, approved plan of a local jurisdiction (e.g., a General Plan).[11] Credits may be applied for each year for the length of the project life, where project life is determined by the assumptions in the infrastructure project's California Environmental Quality Act document. The amount of the credit is determined by the dollars invested, and based on a cost effectiveness value of US$128 per ton of CO_2 reduced. While this option does not directly benefit micromobility (e.g., e-bikes and e-scooters), CARB staff expect that such infrastructure development will support the *use* of micromobility.

Option 2: Connect passengers to mass transit

To qualify for Option 2, a TNC must develop an integrated fare payment system, such that passengers are able to pay for both the TNC ride and a public transit fare at the same time.[12] Rides that connect a TNC passenger to public transit would earn credits based on the P3 distance of the first- or last-mile trip connected to transit, and the CO_2 factor of the TNC vehicle. Several commenters noted at the workshop that the value of the credits under Option 2 is not related to the amount of emissions avoided in any way. CARB staff stated that the purpose is to provide a credit for encouraging greater use of public transit and reducing the total trip length in a TNC; it is more of an incentive-driven option, and is not meant to tie directly to avoided emissions.

However, one potential issue with this option is that the value of the credit depends on the CO_2 factor of the TNC vehicle in which the transit-connected trip is taken — meaning that if the trip is taken in a ZEV, with a CO_2 factor of zero, the current approach would provide no credits at all (and therefore no incentive).[13] This is especially problematic given the overall push to electrify the TNC "fleet" over time, which would necessarily reduce the opportunities to earn Option 2 credits in non-ZEV vehicles. The flip side of the lack of credits for ZEV TNC vehicles is that this option would earn *more* credits for TNC vehicles with *higher* CO_2 factors. CARB has asked for stakeholder feedback on the optional credits, and Option 2 could be revised.

Option 3: Reduce driver cost of switching to a ZEV

Option 3 was discussed at the November 2020 workshop, but is not detailed in the draft Order. This option aims to encourage TNCs to directly invest in their drivers to reduce costs of switching to a ZEV and/or operational costs for electricity and residential charging. CARB staff is seeking input on the best ways to effectuate this intent and formulate it into a credit opportunity. Potential actions by TNCs that could earn credits under Option 3 include: providing subsidies to drivers for the purchase or financing of a ZEV; providing free electricity to drivers for charging; and providing subsidies for the purchase and installation of L2 residential chargers. CARB projects that the value of the credits will be tied to the financial investment. CARB envisions that the investments could be applied to privately owned vehicles, but is still considering eligibility criteria (e.g., investments in drivers who drive at least X miles per year for the TNC).

* * *

CARB will review and have approval authority for all applications for optional credits, and will provide those determinations to the California Public Utilities Commission (CPUC) for use in compliance. Optional CO_2 credits may *not* be banked and used for compliance in future years.

Compliance and Reporting

TNCs will be required to submit a Biennial Compliance Plan beginning January 1, 2022. The plan must describe how the TNC plans to comply with the regulation's targets in the following two years. Additionally, TNCs will be required to submit an Annual Compliance Report by March 1 of every year, covering the previous calendar year. This report will include the TNC's annual GHG emissions and % eVMT for the prior year, as well as any over-compliance credits or optional credits it intends to use. All reporting will be submitted to the CPUC, and the full list of required elements of the Biennial Compliance Plan and Annual Compliance Report is detailed in the Order.[14]

The CPUC will open a parallel regulatory development process via an Order Instituting Rulemaking (OIR) to address regulatory implementation and compliance tracking of the Clean Miles Standard. The OIR will present another forum in which TNCs and other interested parties may seek to alter the application, if not the literal language, of the Clean Miles Standard. This is particularly true for SB 1014, which allows CARB or the CPUC to delay implementation of the targets and goals if either agency finds that there are "unanticipated barriers" to ZEV adoption, and requires a biennial review of such barriers.[15] Thus, the CPUC rulemaking is likely to include a second chance to modify whatever standards CARB adopts at the outset and in the biennial reviews thereafter.

Timeline

The Initial Statement of Reasons (ISOR) is now expected to be released in March 2021, and CARB staff anticipates presenting the regulation to the Board for approval at its May 2021 hearing.

The CPUC expects to issue an OIR related to the Clean Miles Standard in the early part of 2021. The CPUC does not intend to wait for CARB approval of the final Clean Miles Standard to begin its process, as it must have its own program in place prior to January 1, 2022, when TNCs begin submitting Biennial Compliance Plans.

Latham & Watkins will continue to monitor and report on the Clean Miles Standard.

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Endnotes

[1] Exec. Order N-79-20 (Sept. 23, 2020).

[2] The analysis looked only at drivers switching to BEVs, as they have a lower incremental cost than fuel cell electric vehicles (FCEVs).

[3] Order at § 2490.1(e), Table 6.

[4] CARB, November Workshop Presentation at 9.

[5] CARB, Advanced Clean Car Regulation.

[6] A more detailed discussion of the GHG Emission Target equation is provided in our November 24, 2020 Client Alert.

[7] Pool-requested, unmatched rides are those where a rider elects to take a pooled ride, but is not ultimately matched with another rider and the occupancy of the ride is not thereby increased. Therefore, the same average occupancy as non-pooled rides is assumed.

[8] Order at § 2490.1(c), Table 4.

[9] Order at § 2490.1(d).

[10] *See* Order at § 2490.2.

[11] *See* Order at § 2490.2(c).

[12] *See* Order at § 2490.2(d).

[13] CARB, November Workshop Presentation at 17.

[14] *See* Order at § 2490.3.

[15] Pub. Util. Code sec. 5450 (b)(4).