

Updated Informative Digest

Proposed Clean Miles Standard Regulation

Sections Affected: Proposed adoption to title 13, California Code of Regulations, section(s) 2490, 2490.1, 2490.2, 2490.3, and 2490.4.

Background and Effect of the Proposed Regulatory Action

Although California has made progress with reducing emissions, there is still a long road ahead. Transportation emissions continue to rise despite increases in fuel efficiency and decreases in the carbon content of fuel. CARB's 2030 Scoping Plan Update identifies reductions in single-occupancy vehicle travel as a necessary strategy to achieve the statewide emissions target of 40 percent below 1990 levels by 2030. Transitioning the transportation sector to zero-emission vehicles (ZEVs) and reducing vehicle miles traveled (VMT) are also critical to achieving California's health protection goals, minimizing air pollution exposure, and mitigating climate change impacts, particularly to achieve the 2045 carbon neutrality goal.

Senate Bill 1014 (Skinner, Chapter 369, Statutes of 2018)—the Clean Miles Standard and Incentive Program of 2018—directs CARB to adopt and the California Public Utilities Commission (CPUC) to implement the Clean Miles Standard program to put environmental requirements in place on transportation network companies (TNCs) in California. The proposed regulation is a first-of-its-kind, in-use light-duty fleet rule for reducing emissions in the TNC sector. Electrification targets are set as percent electric vehicle miles traveled (eVMT) and greenhouse gas (GHG) emission targets are set as grams of CO₂ per passenger-mile-traveled (g CO₂/PMT). The required targets direct TNCs to increase miles driven by cleaner vehicles, including fuel-efficient vehicles and ZEVs. The GHG emission target also encourages a reduction of VMT relative to passenger miles traveled (PMT) through strategies such as increasing pooled (or shared) rides and decreasing deadhead miles, which are excess miles from TNC vehicles driving without passengers. Furthermore, the proposed regulation will support active transportation and public transit by providing regulatory compliance credits for use toward GHG compliance when TNCs facilitate those modes of travel.

Background

Innovations have been emerging in the transportation sector to meet the needs of Californians. Beginning in 2012, TNCs in California have been providing on-demand rides by connecting passengers with drivers through a technology-based platform. TNCs are well-positioned to help state and local agencies meet air quality and climate goals through electrification of their fleet. In fact, the two

largest TNCs in California, Uber and Lyft, have already been implementing pilot programs to increase ZEV use on their platforms in the U.S. and globally.

ZEV technology is a good fit for the ride-hailing platform. ZEVs are uniquely suited for frequent stop-start driving of ride-hail operations, given the lack of engine start and idling emissions. Not only does it benefit the environment, but it also benefits TNC drivers and the communities those drivers serve. TNC drivers could benefit economically by switching to a ZEV. Even with current higher purchase cost of ZEVs, lower fuel and maintenance costs can lead to net savings over time.

Additionally, VMT reduction through pooling, reducing deadhead miles and connecting riders to active transportation and transit will ensure that TNCs become a more sustainable transportation option.

Summary of the Proposal

The proposed regulation is the first statewide program to impose environmental requirements for TNC service miles. The specific requirements proposed in this regulation include two annual targets—electrification targets in the metric of percent eVMT and GHG targets in the metric of g CO₂/PMT.

The electrification and GHG targets start in 2023 at 2 percent eVMT and 252 g CO₂/PMT, respectively, and slowly increase in stringency to 90 percent eVMT and 0 g CO₂/PMT by 2030. The electrification targets can only be met with battery electric vehicles (BEVs) or fuel-cell electric vehicles (FCEVs) for miles driven with passengers in the car. For GHG target compliance, TNCs may have a variety of strategies for reducing their company-wide GHG emissions. These include improving fleet-wide fuel efficiency, reducing VMT by increasing shared rides, reducing VMT by reducing deadhead miles, and earning CO₂ credits by investing in active transportation infrastructure or by connecting riders to mass transit. The proposed regulation also requires annual trip-level and driver data submittals as well as annual compliance reports.

Small TNCs whose operations result in 5 million annual VMT or less statewide will be exempt from the electrification and GHG targets as well as the annual compliance reports. Small TNCs are not exempt, however, from continued annual data submittals as part of the TNC permit as required by the CPUC. If a small TNC grows to exceed 5 million VMT in a given calendar year, they will be subject to the requirements in that calendar year.

This regulation will also require future automated vehicle fleets that operate with a TNC permit at a large scale to meet the same annual targets.

Objectives and Benefits of the Proposed Regulatory Action:

The proposed regulation will decrease GHG emissions and criteria pollutant emissions, such as NO_x and PM_{2.5}, which in turn will help California meet its climate and air quality goals. Given that the GHG targets require further emission reduction than can be achieved by minimum electrification, the proposed regulation also encourages VMT reduction (relative to passenger miles) and encourages other modes of transportation. In addition to emission reductions, the proposed regulation also increases ZEV awareness in California by exposing numerous TNC riders to the technology through trips served by ZEVs.

To comply with this regulation, TNCs must work with drivers on their platforms to foster ZEV adoption. The regulation does not specify the exact strategies with which the TNCs comply, nor can we predict how the TNC business model will evolve. To determine feasible targets, however, CARB staff conservatively assumed that TNC drivers would incur the cost burden of switching to ZEVs. To minimize adverse impacts on TNC drivers, staff derived electrification targets based on modeling that required drivers would see zero-net-cost increase over one year before they would switch to a ZEV. This one-year payback period is, in staff's estimate, sufficiently short to make purchasing a ZEV feasible for most TNC drivers.

Inputs to the model related to cost included the incremental cost of ZEVs, home chargers, fuel and maintenance savings, and a monetized barrier to operating a ZEV for ride-hailing. The model estimated the annual percentages of TNC vehicles that could switch to a ZEV with zero net cost after one year. Under the model, drivers with the highest annual TNC service miles and the lowest vehicle fuel efficiency switched to ZEVs first. Applying this methodology for each year of the regulation, beginning in 2023, staff derived the final electrification target of 90 percent eVMT in 2030. Given that a small fraction of TNC vehicles accrue the highest annual miles, this 90 percent target requires less than half of TNC vehicles to switch to ZEVs by 2030. For the GHG target of 0 g CO₂/PMT, TNCs could comply by fully electrifying their fleet, projected to be approximately 770,000 vehicles in California by 2030.

Additionally, TNCs may earn optional CO₂ credits for actions that support transit and active transportation. This will encourage VMT reduction strategies through TNC and mobility provider partnerships rather than eroding transit market share, a trend currently occurring in urban areas. It will also help to support transportation alternatives, which is important for lower-income residents that do not have access to TNC services or cannot afford their own vehicle.

Cost and Emission Impacts

To assess cost and emission impacts, CARB staff modeled compliance using the GHG target because it is the more stringent of the two requirements. The GHG target in 2030 is equivalent to 100 percent eVMT in TNC fleets. Staff used this 100% electrification amount to estimate reductions in GHG emissions and criteria emissions, including NO_x and PM_{2.5}, as well as health costs for California residents. Staff estimated cumulative statewide emission reductions from the proposed regulation from 2023–2031 to be 298.03 tons NO_x, 93.21 tons PM_{2.5}, and 1.81 million metric tons (MMT) CO₂.

The proposed regulation will result in an estimated reduction of 0.36 MMT of CO₂ in 2030, which represents a 0.39 percent reduction in light-duty vehicle CO₂ emissions projected for that year. Because this emission reduction estimate is based only on an assumption of 100 percent eVMT by 2030, it does not include the expected reductions from implementing other GHG reduction strategies, such as increasing pooling and decreasing deadhead mile.

Description of Regulatory Action

On March 30, 2021, CARB released the Notice of Public Hearing (45-Day Notice) and Staff Report: Initial Statement of Reasons for Rulemaking (Staff Report), titled “Public Hearing to Consider Proposed Clean Miles Standard,” for public review. The Staff Report contains a description of the rationale for the proposed amendments. On March 30, 2021, all references relied upon and identified in the Staff Report were made available to the public. CARB received written comments from 18 stakeholders during the 45-Day Notice comment period.

On May 20, 2021, CARB conducted a public hearing. CARB staff informed the Board of the proposed adoption of the Clean Miles Standard and the Board received written and oral comments from the public. At the conclusion of the hearing, the Board approved Resolution 21-10 for adoption of the proposed regulation.

In accordance with Government Code section 11346.8, the Board directed the Executive Officer to adopt the proposed amendments after making any appropriate modifications available to the public for a period of at least 15 days, including any additional supporting documents and information. The Board further provided that the Executive Officer shall consider written comments submitted during this period, shall make such modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if warranted.

After the hearing, CARB released a Notice of Public Availability of Modified Text (15-Day Notice) on September 14, 2021. The text of the proposed

regulatory modifications was posted on CARB's website at <https://ww2.arb.ca.gov/rulemaking/2021/cleanmilesstandard>, accessible to all stakeholders and interested parties. The modifications to the regulation included clarifying the implementation role of the CPUC and broadening the transit CO₂ credit provision to include multiple payment options. CARB received written comments from three stakeholders during the 15-day comment period, which closed on September 29, 2021.

Comparable Federal Regulations:

No current federal regulations address the same issue as CARB's proposed greenhouse gas reduction and electrification targets for TNCs.

An Evaluation of Inconsistency or Incompatibility with Existing State Regulations (Gov. Code, § 11346.5, subd. (a)(3)(D)):

During the process of developing the proposed regulatory action, CARB conducted a search of any similar regulations on this topic and concluded these regulations are neither inconsistent nor incompatible with existing state regulations.