Proposed Clean Miles Standard Regulation
Board Hearing
May 20, 2021
Outline

Background
SB 1014 and Base Year Inventory

Proposed Requirements
Electrification and GHG Targets
Exemption and Flexibilities
Optional GHG Credits

Proposal Impacts

Changes to the Proposed Regulation
Senate Bill 1014
Clean Miles Standard

Applicable to:
Passenger service by transportation network companies (TNCs)

Key goals:
• Reduce GHG emissions
• Increase electrification
• VMT reduction
Timeline

Regulation development

Jan. 2019
SB 1014

Public workshop
Data received

Jan. 2020
Board Hearing
TNC base year inventory

Jan. 2021
Board Hearing
Adopt targets

Jan. 2022
TNCs submit two-year plans

Jan. 2023
Compliance begins

Program implementation
Trip Segments

Period 1
Driver looking for riders

Period 2
Driver en route to riders

Period 3
Rider(s) in vehicle
2018 Base Year as a Starting Point

1.25% of CA’s light-duty VMT was associated with TNCs

4.3 Billion TNC Miles

62% Passenger VMT

38% Deadhead VMT

Pool-requested
TNC Base Year Emissions Compared to the California Fleet

Vehicle CO₂ Emission Rates (g/mi)

- 2018 TNC Base Year: 287 g/mi
- CA Fleet Average: 341 g/mi

1% of California’s light-duty GHG emissions from TNCs
Setting the Targets

Electrification Targets

- Stakeholder Input
- Upfront & Ongoing Costs per Year
- Base Year Data
- Technology Readiness
- Technology Availability

CARB
Electric vehicle miles traveled (eVMT)

Fraction of vehicle miles traveled by battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV)
Electrification Targets

- 2% in 2022
- 4% in 2023
- 13% in 2024
- 30% in 2025
- 50% in 2026
- 65% in 2027
- 80% in 2028
- 90% in 2029

46% cars
How to meet this target?

\[
\% \text{ eVMT} = \frac{\text{Annual P3 miles completed by ZEVs}}{\text{Annual P3 miles}}
\]

Why Period 3 segments only?

- To reduce potential for excess empty miles by ZEVs
Greenhouse Gas Targets

Grams $\text{CO}_2$ per passenger-mile traveled

Total vehicle $\text{CO}_2$ emissions relative to total passenger miles traveled
Greenhouse Gas Targets

The gap
Grams CO$_2$ per Passenger-Mile Traveled

\[
\frac{g \text{ CO}_2}{\text{PMT}} = \frac{\sum (VMT_{All} \times \text{CO}_2 \text{ factor})_{\text{trip}}}{\sum (VMT_{Period \ 3} \times \text{occupancy factor})_{\text{trip}}}
\]

**Encourages lower fuel consumption vehicles, such as hybrids**

**Encourages higher occupancy, pooling**

**UNITS:**
- CO$_2$ factor – g/mi
- Occupancy factor – passengers
Optional GHG Credits

Transit Connected Trips
• Vehicle trip connected to a mass transit trip
• Purchased through integrated fare systems

Bike or Sidewalk Investment
• Must be part of an approved regional transportation plan
• Construction or repair of a sidewalk

Must be used in the same year they are earned and cannot be banked for use in future years
Exemptions and Flexibility

1. Small TNC exemption:
   Applicable to TNCs with annual VMT ≤ 5 million
   Exempt from:
   • Electrification and GHG targets, Annual Compliance Report
   Not exempt from:
   • Continued annual data submittal

2. Wheelchair accessible vehicle (WAV) trip exemption

3. Flexibility:
   Carry forward over-compliance GHG up to 3 years
## Impacts from the Proposed Regulation

### Cumulative Emission Reductions:

<table>
<thead>
<tr>
<th>Years</th>
<th>PM$_{2.5}$ (tons)</th>
<th>NO$_x$ (tons)</th>
<th>GHG (MMT CO$_2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023-2031</td>
<td>93.21</td>
<td>298.03</td>
<td>1.81</td>
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Net Increase in CA Electric Miles

Statewide Total eVMT from BEV and FCEV

- **LDV Baseline**
- **TNC BAU extra eVMT**
- **Proposed Regulation**
Net Costs Savings for the Proposed Regulation Increase Over Time

In 2030, the proposed regulation is estimated to provide a net benefit of $215 million.

Driver meetings and stakeholder conversations confirm that upfront costs are still a barrier to ZEV adoption.
## Potential Savings for a TNC ZEV Driver in 2027

<table>
<thead>
<tr>
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<th>ICE</th>
<th>ZEV</th>
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<tbody>
<tr>
<td>Capital Cost</td>
<td>--</td>
<td>+$575 (incr. vehicle price) + $221 (charger, annualized) - $500 (CVRP) - $1000 (LCFS) = -$704 saved to purchase ZEV</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>--</td>
<td>-0.035/mi</td>
</tr>
<tr>
<td>Insurance Cost</td>
<td>--</td>
<td>+$29/year</td>
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<tr>
<td>Operational Cost</td>
<td>$2.63/gal (45 mi/gal)</td>
<td>$0.19/kWh (equivalent to $1.90/gal gasoline) PC (4.5 mi/KWh)</td>
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**Net cost savings:**

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<tr>
<td></td>
<td>$1,670 with 20,000 annual miles</td>
<td>$170 with 20,000 annual miles</td>
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<tr>
<td></td>
<td>$2,212 with 30,000 annual miles</td>
<td>$712 with 30,000 annual miles</td>
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*Note: costs/savings projected are in 2018 dollars*
Stakeholder Positions

• **Regulated Party**
  • Additional “optional GHG credits”
  • “Off-ramp” (relax rule) if unexpected market conditions arise
  • Targets not feasible without more government support on EV adoption

• **Environmental Advocates**
  • Maintain proposed 2030 targets
  • Publicly release annual compliance reports

• **Labor and Driver Advocates / Drivers**
  • Ensure drivers do not bear any regulation costs
  • Prefer the companies are held accountable to reduce their cost
Proposed 15-day Changes

1. Clarify CPUC shall administer the optional GHG and carry-over credits

2. Clarify CPUC has the ability to add additional optional GHG credit categories during their proceedings

3. CPUC to define Biennial Plan requirements, not CARB
CARB Role Going Forward

• Support CPUC proceedings opening in 2021
• Public data disclosure to track annual compliance
• Monitor infrastructure and costs
  • Charger infrastructure access (e.g., home)
  • Electrification costs (e.g., ZEVs, electricity)
• Evaluate driver impacts
  • Engagement and research
  • Consider new data requirements
Proposed Resolution 21-10

Approve for adoption:
Section 2490, Title 13, California Code of Regulations
Thank you

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