



Clean Miles Standard Workshop

PROPOSED REGULATION TARGETS

November 19, 2020

Webinar Participation

- All participants will be muted during the workshop.
- During the Q&A session following the presentation, please type in your question using the Questions function of GoToWebinar.
- Questions can also be sent to cleancars@arb.ca.gov to be addressed at a later time.

Workshop Topics

New Board Hearing date

Draft electrification targets

Draft greenhouse gas targets

Optional credits

Senate Bill 1014



Applicable to:

Passenger service by transportation network companies (TNCs)

Key goals:

- Reduce GHG
- Increase electrification
- Support other transportation modes

SB 1014 Deadlines

Jan 2020

- CARB establishes base year inventory

Jan 2021

- CARB adopts targets, CPUC implements program

Jan 2022

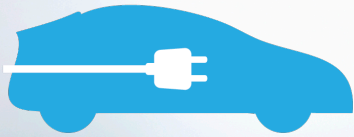
- TNCs begin submitting 2-year plans

2023

- TNCs begin meeting annual targets

Board date moved
to May 2021

Electric vehicle miles traveled (eVMT)

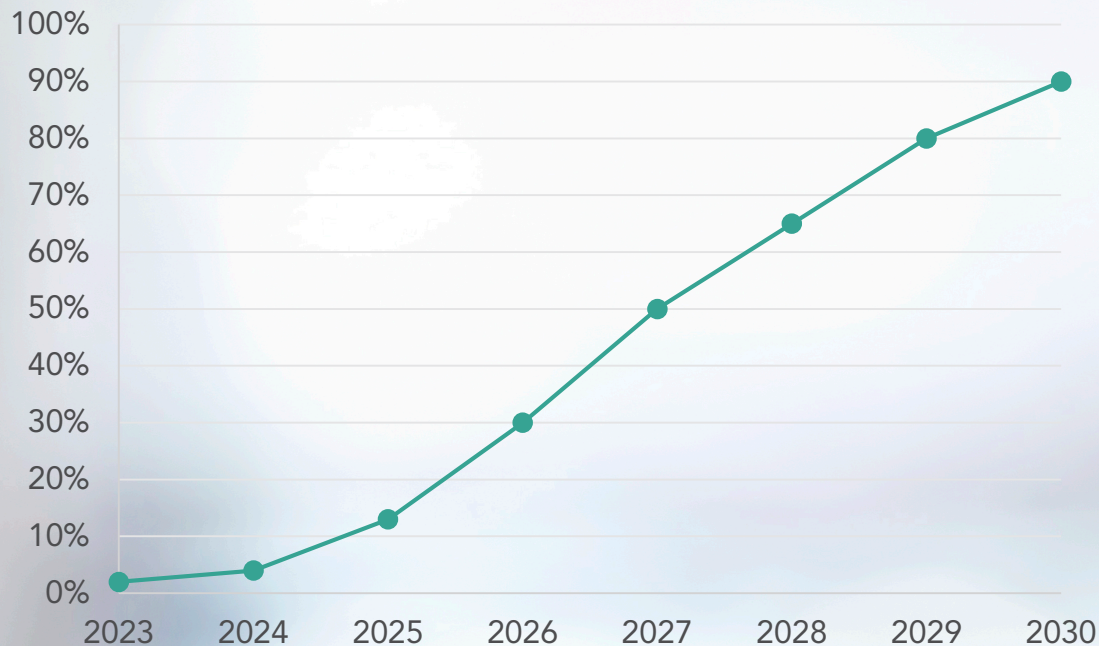


Fraction of vehicle miles traveled by battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV)

Updated Electrification Target Assumptions

Input Values	Updates
BEV Barrier	\$50/week in 2020 and decreasing linearly to \$0/week in 2030
Fuel Costs	Gasoline price projections to use updated CEC IEPR estimates
Level 2 Charger Costs	Level 2 home charger costs amortized over 7 years
DCFC & Level 2 Utilization	DCFC/L2 utilization split assumed to be 50/50 in all years of the analysis
Low Mileage Barrier	No longer a barrier since we assume savings on personal and non-TNC miles

Proposed eVMT Targets



Calendar Year	Target (% eVMT)
2023	2%
2024	4%
2025	13%
2026	30%
2027	50%
2028	65%
2029	80%
2030+	90%

Characteristics of vehicles that switched to ZEVs in the cost model

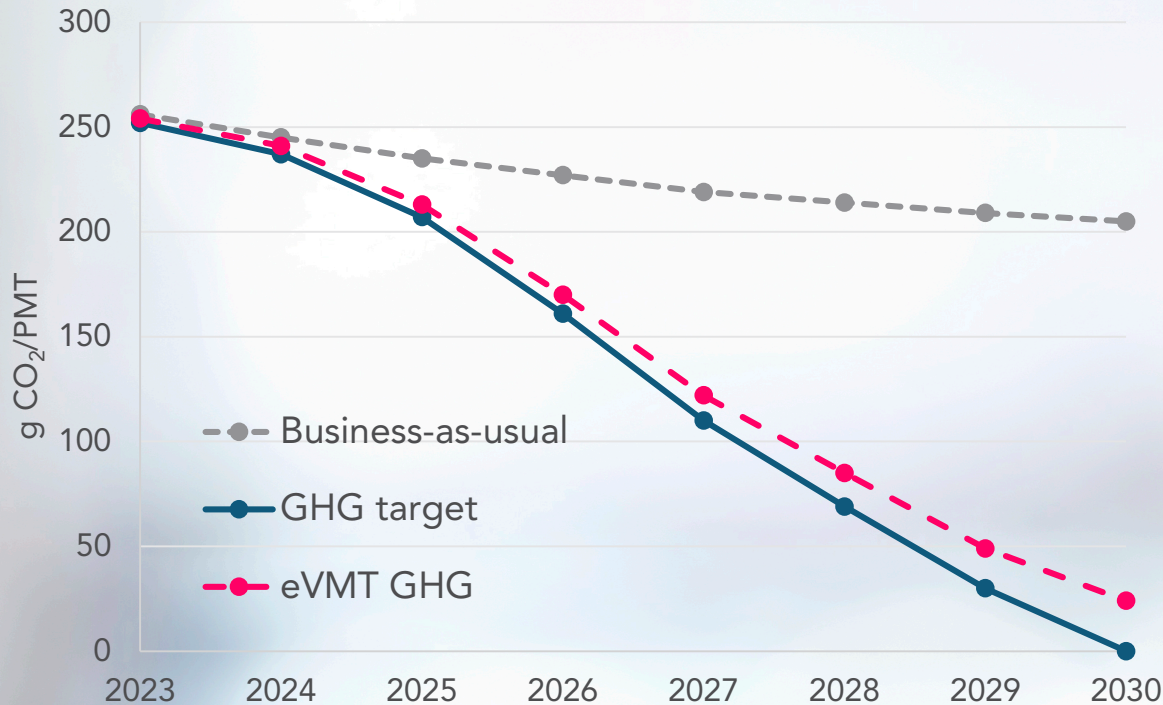
- 43% of 2030 TNC vehicles are switched to ZEVs
- In early years, primarily high mileage vehicles are switched
- Average age of vehicle switched to ZEV varied between 1-3 years

Year	2023	2024	2025	2026	2027	2028	2029	2030	
Number of Vehicles Switched	466	3,378	22,114	72,101	139,659	201,516	273,281	333,173	
Avg. age vehicles switched	1	→			2	→		3	→

Greenhouse Gas Target

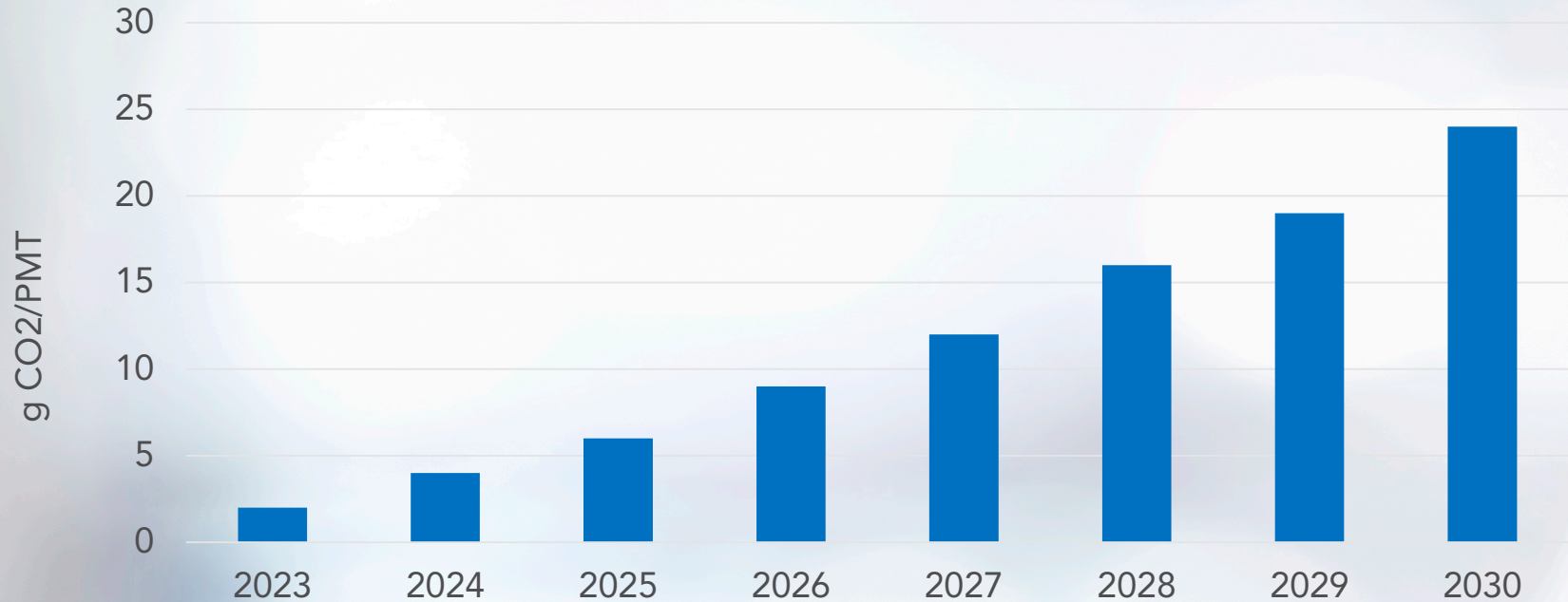
$$\frac{\text{g CO}_2}{\text{Passenger mile traveled}} = \frac{\text{VMT}_{\text{Periods 1,2,3}} \times \text{CO}_2 \text{ per mile}}{\text{VMT}_{\text{Period 3}} \times \text{Occupancy}}$$

Proposed GHG Targets



Calendar Year	Target (g CO ₂ /PMT)
2023	252
2024	237
2025	207
2026	161
2027	110
2028	69
2029	30
2030+	0

GHG gap between the targets



Compliance options to fill the gap



Electrification



Deadhead Mile Reduction



Increased Shared Rides

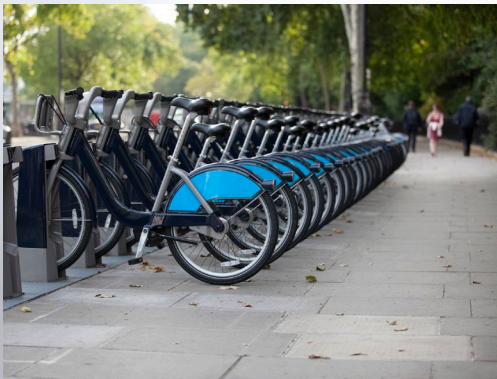


Optional Credits*

**Credits cannot be banked*

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1. Invest in bikeways and sidewalks



2. Connect passengers to mass transit



3. Reduce driver costs



**Credits cannot be banked*

Optional Credit 1

Investment in bikeway/sidewalk projects

To qualify:

Project is in an existing, approved plan of local jurisdiction

Information submittal

Credits can be applied for each year* of the length of *project life*

Optional Credit 1

Investment in bikeway/sidewalk projects

$$CO_2 \text{ credit} = \frac{\text{Dollars invested}(\$) \times 907,185}{\$128 \times \text{Project Life}}$$

\$128 is a cost-effectiveness value (in dollars per ton of CO₂) for bikeway and sidewalk infrastructure, derived from cost-effectiveness values for PM2.5, CO and NO_x from the FHWA and emission rates from the EMFAC2017 model.

Project life is the number of years the project will be operational as provided by the CEQA lead agency of the project.

Optional Credit 2

Connect passengers to mass transit

To qualify:

Integrated fare payment system

Data submittal

Use P3 distance of first- or last-mile connected trip,
whichever is greater

$$CO_2 \text{ credit} = VMT_{T,P3} \times CO_2 \text{ factor}$$

Optional Credit 3

Staff seeking input on multiple concepts to reduce driver costs

GHG credits for dollars invested in ZEVs	GHG credits for electricity used by drivers	GHG credits for L2 home charger
Subsidize purchase or financing of ZEV. This could also be used to subsidize ZEV short term rentals	CO2 credit for ZEV drivers, based on proof of free electricity from TNCs given to drivers	Subsidize purchase and installation of level 2 home chargers

Applying Optional Credit

$$\frac{g CO_2}{PMT} = \frac{\sum(VMT_{P1,P2,P3} \times CO_2 factor) - CO_2 credits}{\sum(VMT_{P3} \times occupancy)}$$

Regulation Timeline

November 2020

Draft regulation posted on CMS website

March 2021

Initial Statement of Reasons to be released

May 2021

Regulation proposal at Board Hearing

Requesting Stakeholder Feedback

Please submit comments by December 11, 2020 to
cleancars@arb.ca.gov

Q&A

Please submit your questions via the
GoToWebinar Questions function