

TWO WAYS TO ACCELERATE GASOLINE CUTS IN MARYLAND

Presentation to:

Maryland Commission on Climate Change
Mitigation Working Group

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Coltura

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COLTURA

ABOUT COLTURA

MISSION:

To improve climate, health, and equity by accelerating the switch from gasoline and diesel to cleaner alternatives.

METHODS:

Research, Policy Development & Advocacy

LOCATION:

Offices in Seattle and Silicon Valley

Collaborations in Michigan, New Jersey, Massachusetts, Rhode Island

FOUNDED:

2014

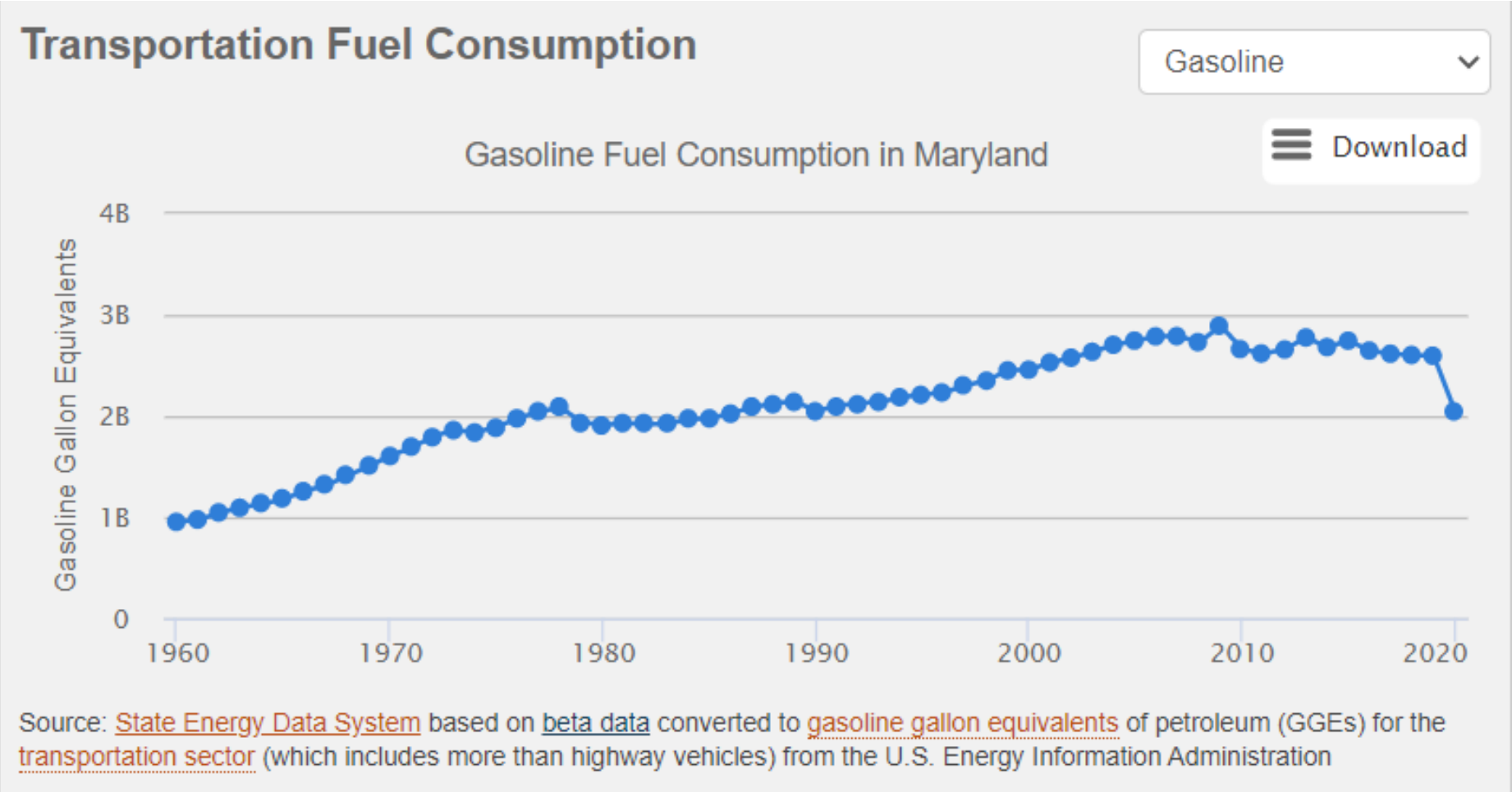
TWO STRATEGIES TO CUT GASOLINE USE FASTER

CLEAN CARS 2030:
(Medium to Long Term)

State Target & Plan for 100% of Light Duty Vehicle Sales to Be Electric by 2030

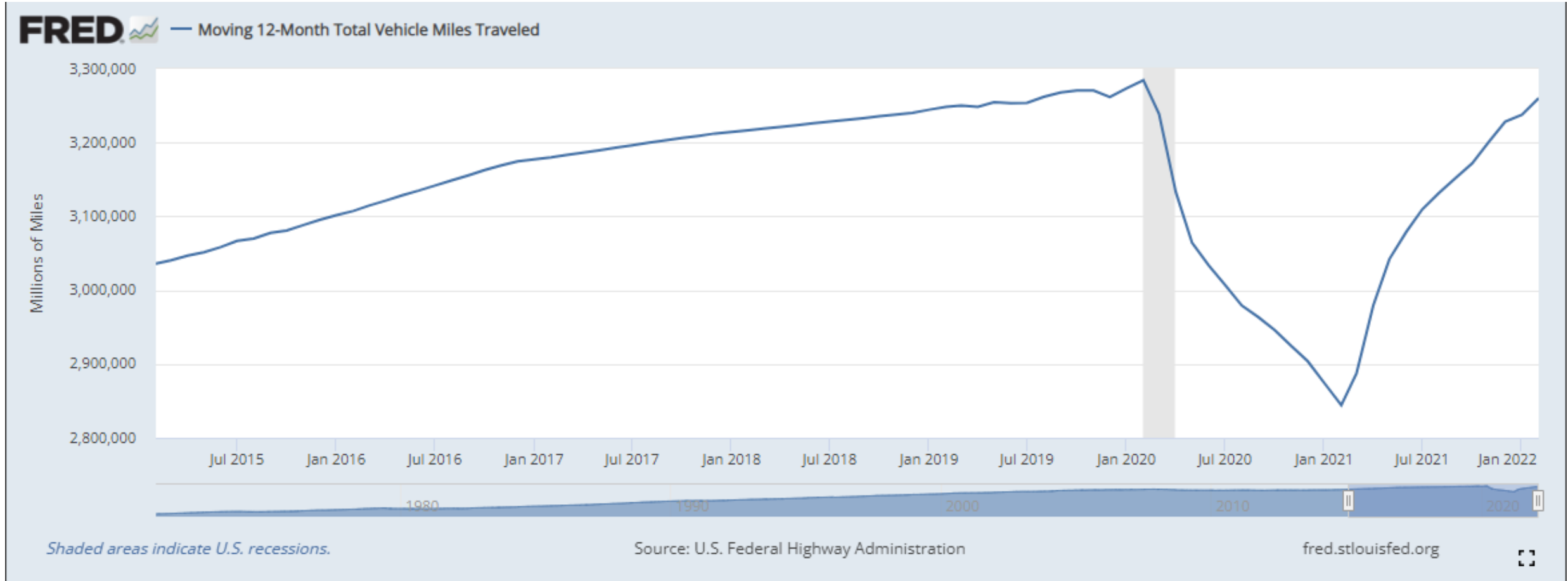
GASOLINE SUPERUSERS: Prioritize Transition of Biggest Gasoline Users to EVs
(Short to Medium Term)

GASOLINE SALES: MARYLAND



Sources: U.S. Alternative Fuels Data Center; US Energy Information Agency

COVID BLIP OVER



Source: US Federal Highway Administration

CLEAN CARS 2030

2030 Target:

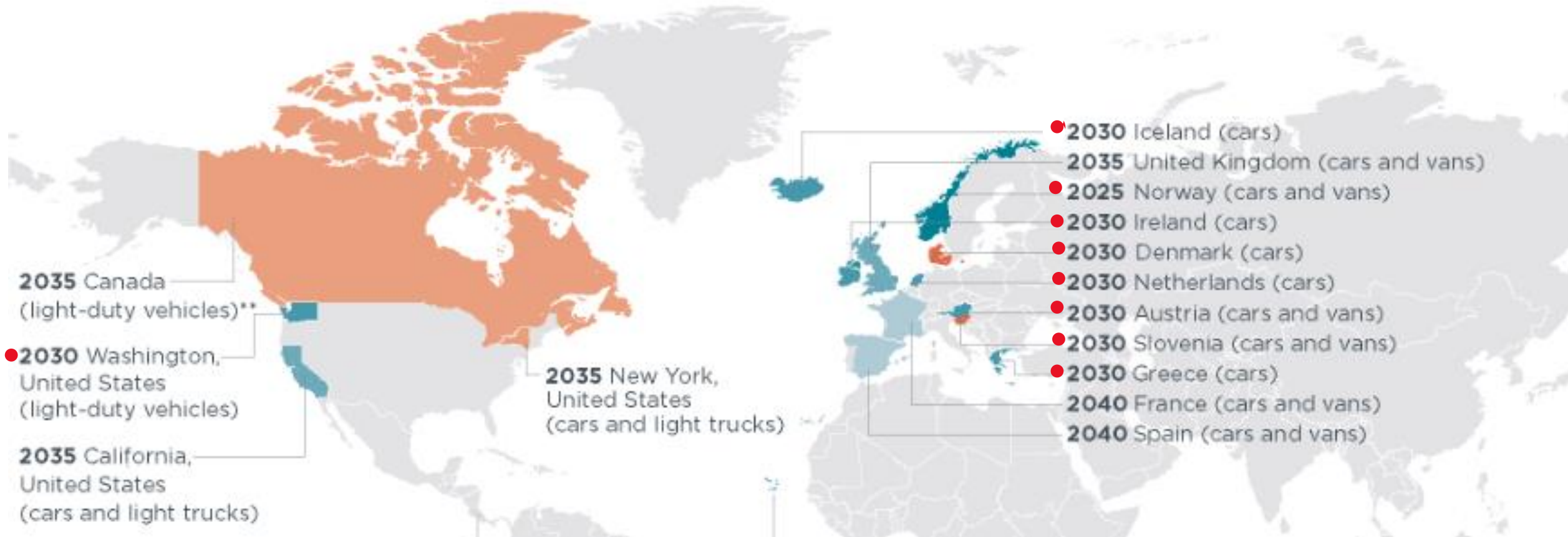
Starting with model year 2030, all new cars must be electric

2030 Plan:

All-of-government plan to achieve 2030 target

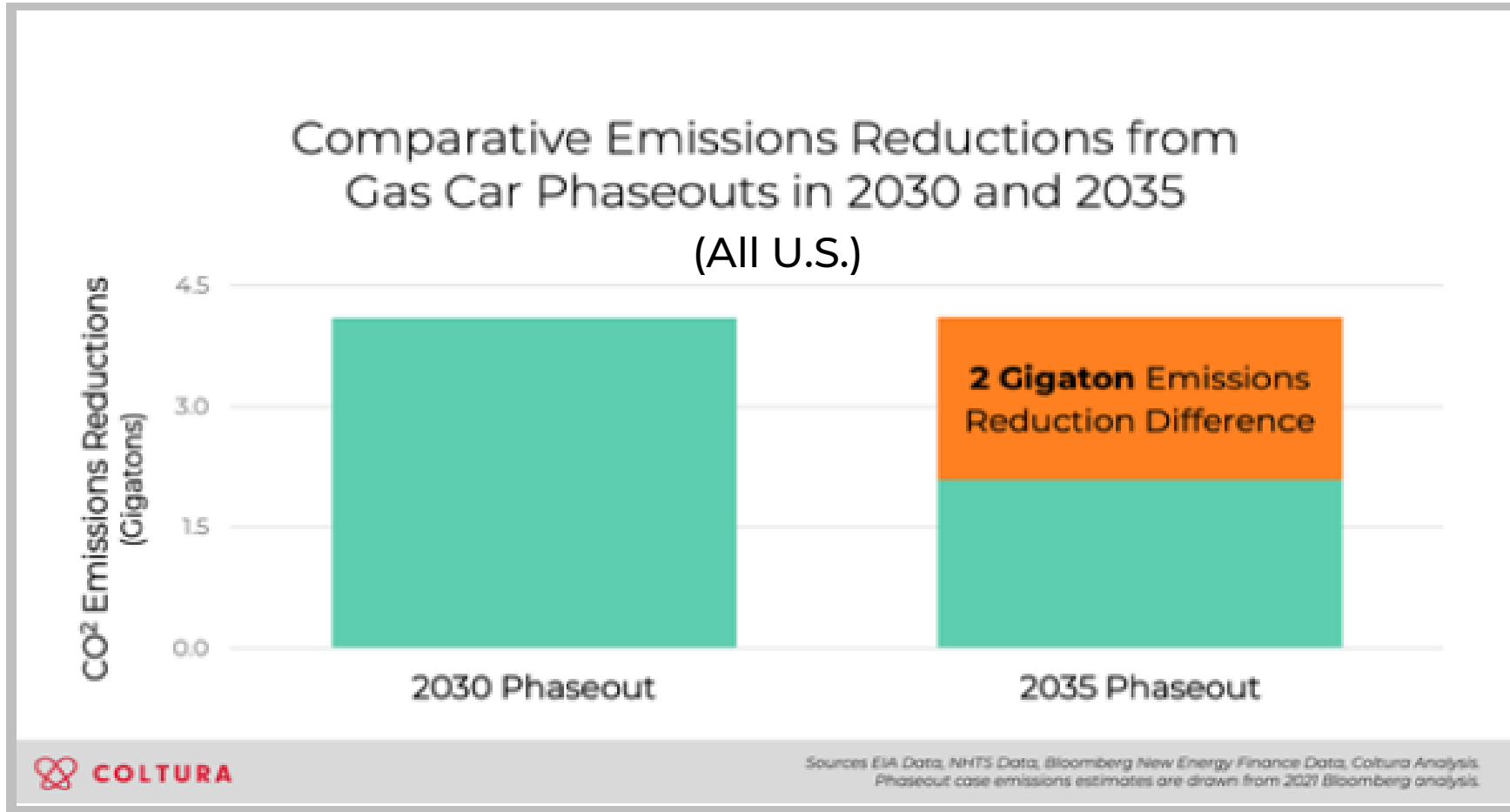
REINFORCE MARKET SIGNAL & MOMENTUM

Governments with official targets to 100% phase out sales or registrations of new internal combustion engine light-duty vehicles (passenger cars and vans/light trucks) by a certain date* (Status: Through March 2022)



Source: ICCT

CO2 BENEFITS OF CLEAN CARS 2030

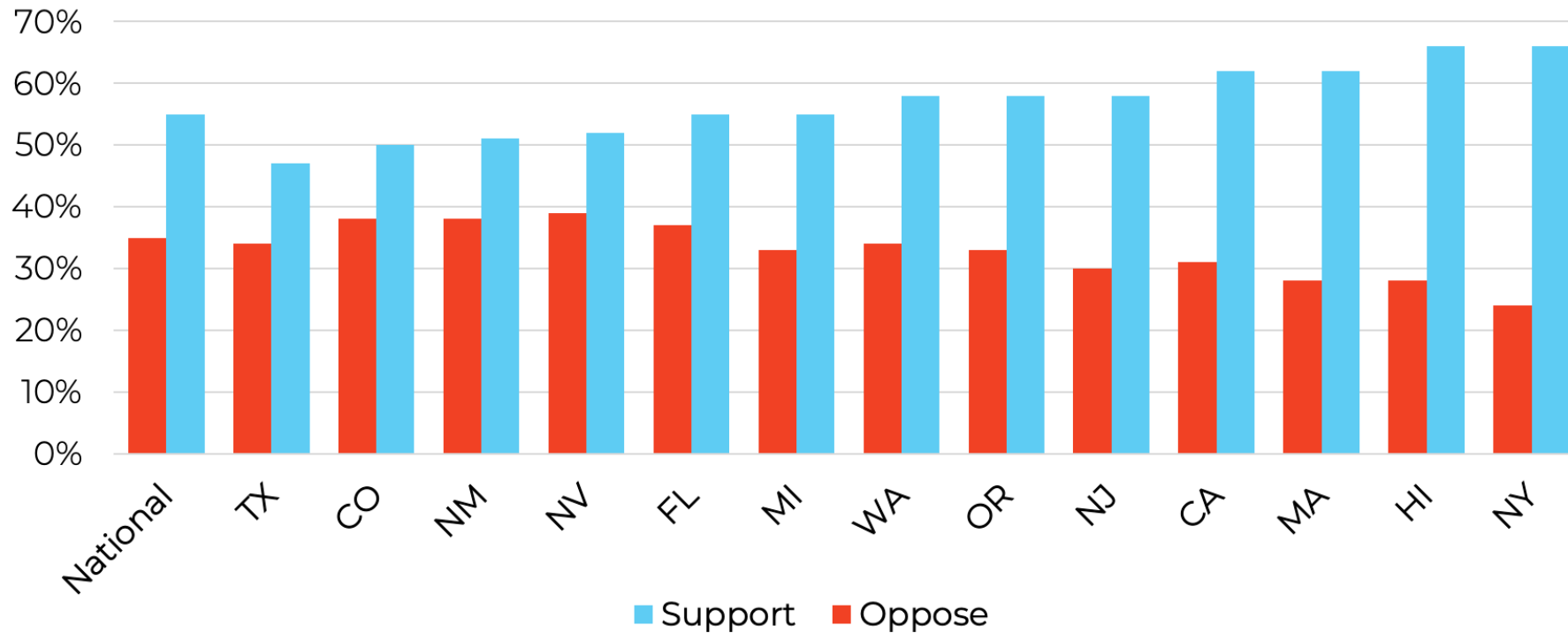


JUMP START 100% BY 2030

EV PLANNING

- Charging
- Grid Upgrades
- Financing
- Public Education
- Equity

Clean Cars 2030 State Poll

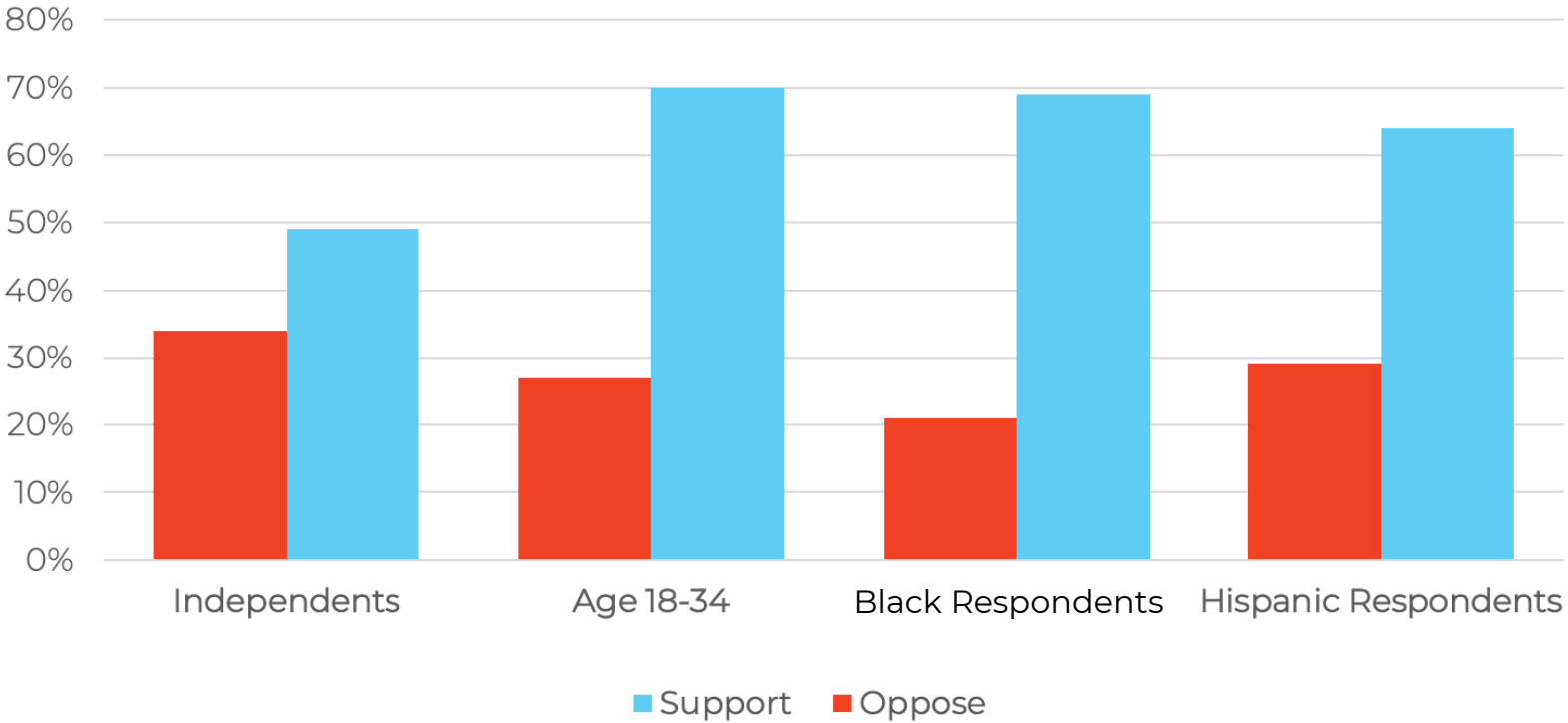


Climate Nexus/Yale/GM Poll: October 2021

“There’s currently a policy under consideration in your state requiring all new cars sold in your state to be electric starting in 2030 to reduce air pollution, combat climate change, create jobs, and keep energy dollars in the state. The policy would require all cars and trucks manufactured in 2030 or later be electric. Individuals would still be able to drive, buy, and sell gas-powered cars manufactured before 2030. Do you support or oppose this policy?”

Clean Cars 2030 State Poll

Key Constituencies



CLEAN CARS 2030 TARGET STATES

Washington State -- **Passed** in 2022

Michigan -- Gov. Whitmer Plan—2 million EV target by 2030
& planning process to get there

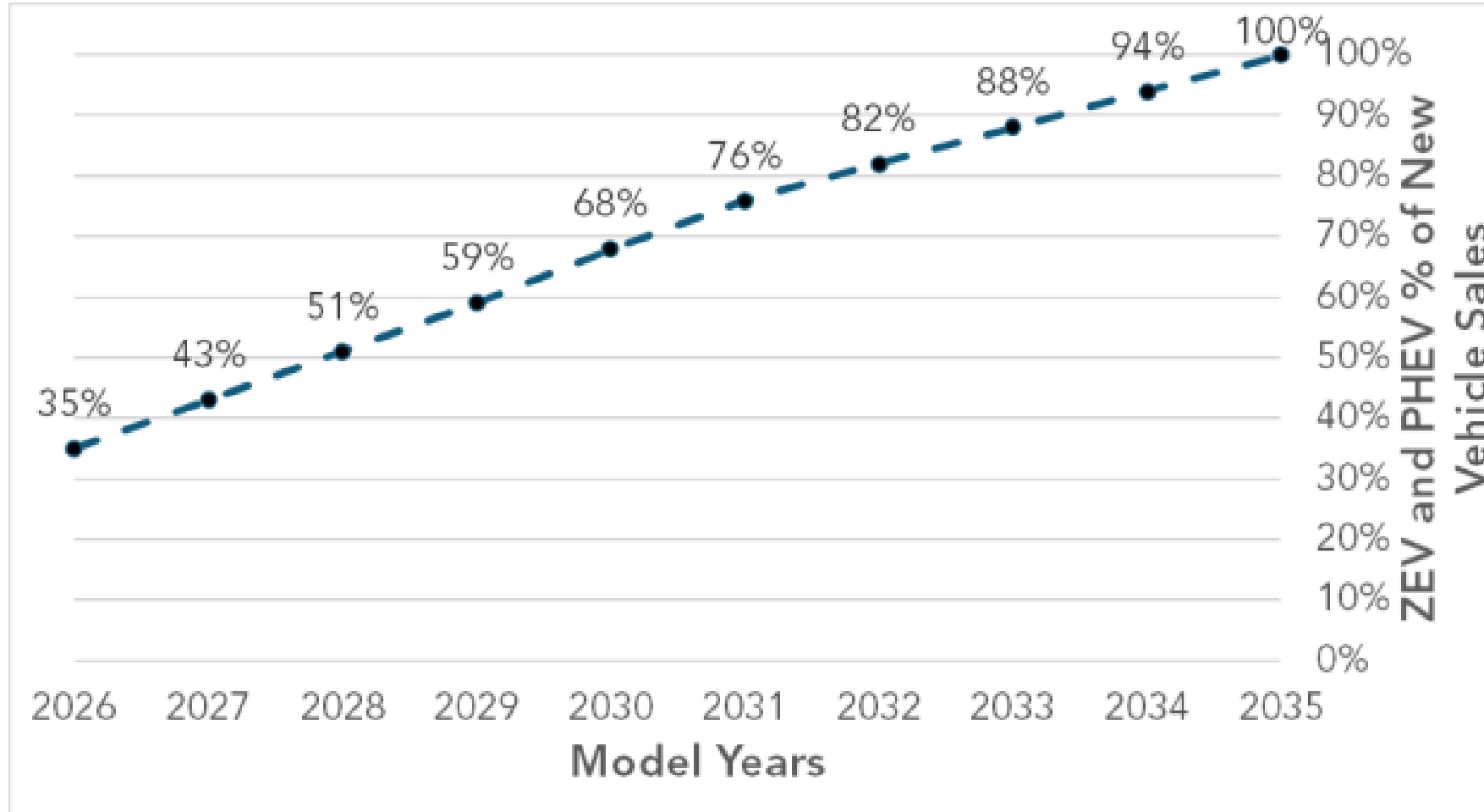
Massachusetts -- Gov. Baker Plan & Legislation—750,000 EVs by
2030 & Plan

Rhode Island -- Clean Cars 2030 introduced in both chambers

New Jersey-- Talking to Gov. Murphy

CALIFORNIA ACC II

Proposed Annual ZEV Requirement



ACC II ROAD AHEAD



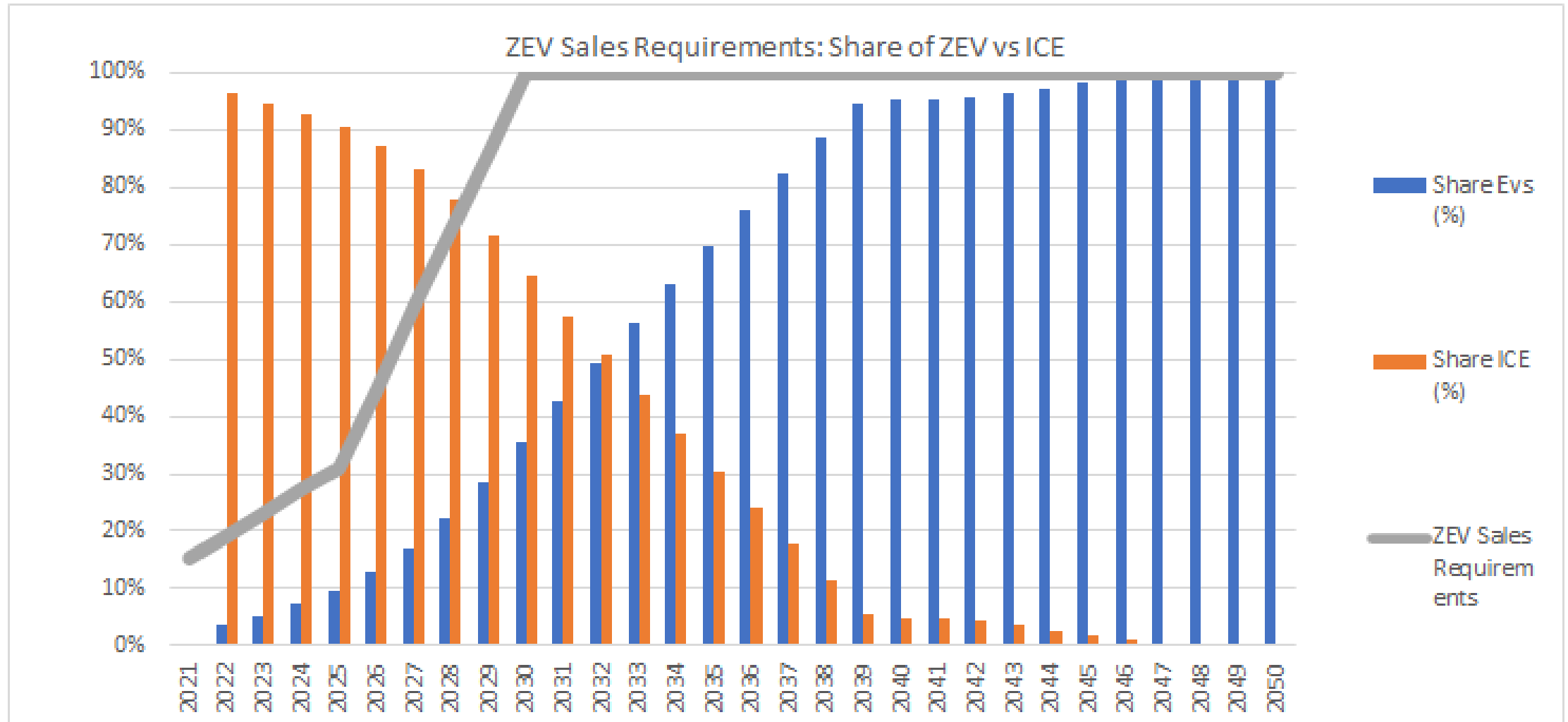
- **California complete rulemaking**
- **Court challenge from 17 State AGs**
- **Obtain EPA waiver**

CLEAN CARS 2030 BOLSTERS ACC II

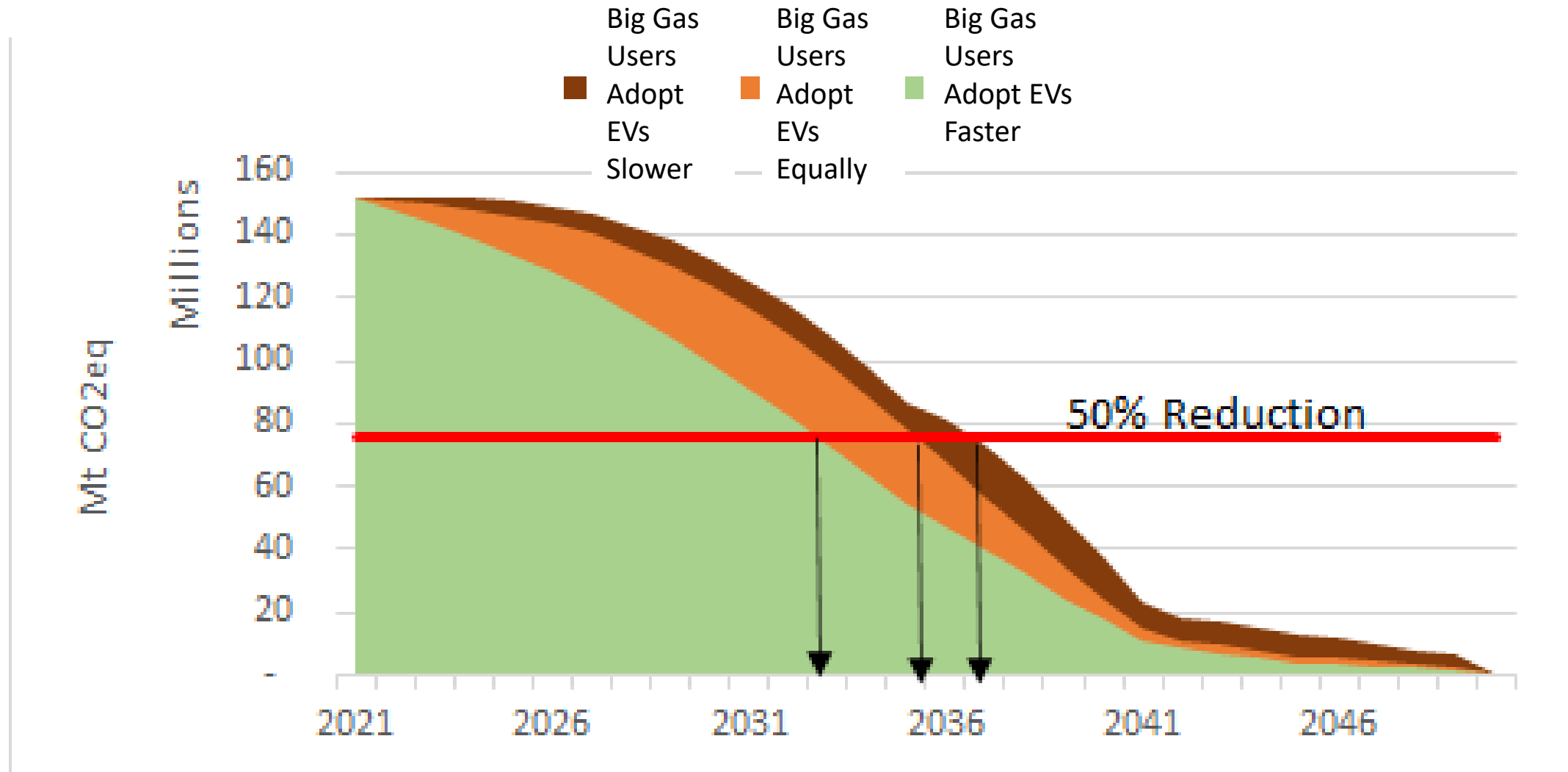
- Helps CARB Set Aggressive Standards
- Generates Momentum to Enact ACC II
- Jumpstarts 100% EV planning process & lowers potential for backlash
- Backstops ACC II Legal & Political Risks

CLEAN CARS 2030

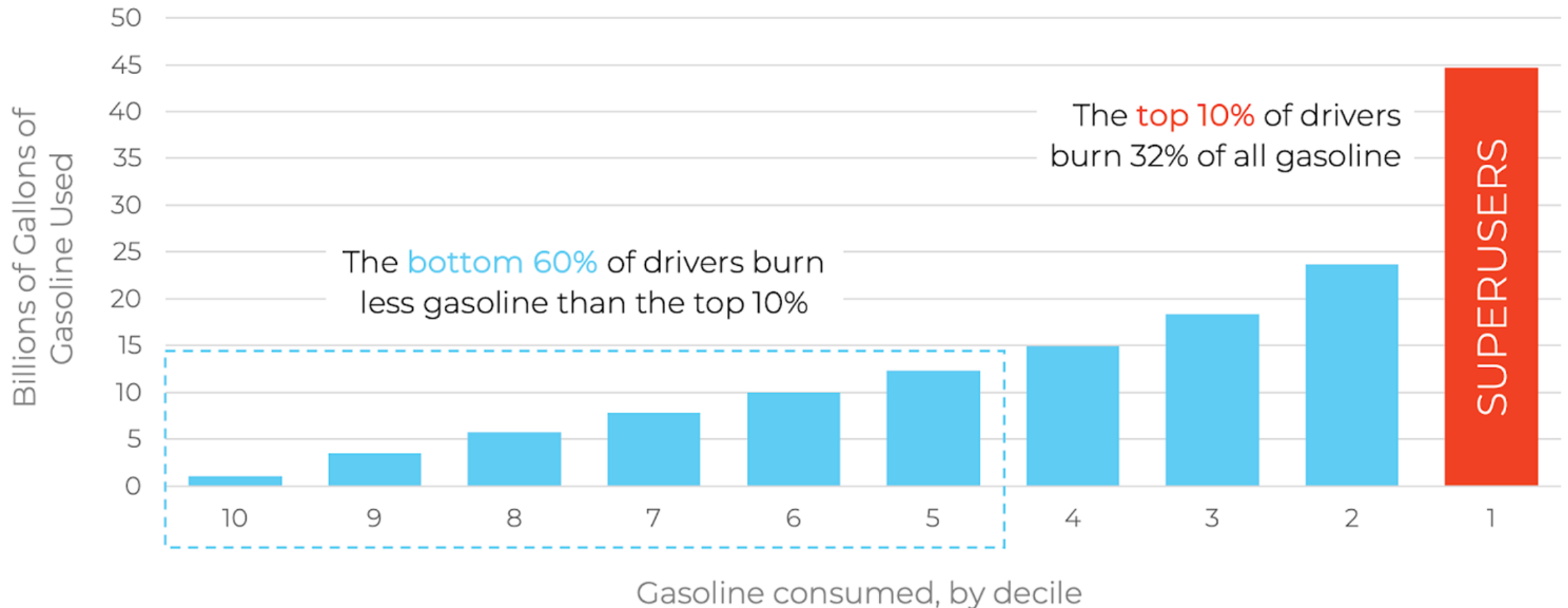
50% EVs on Road Attained Around 2032



EMISSIONS CUTS DEPEND ON WHO IS DRIVING THE EVS

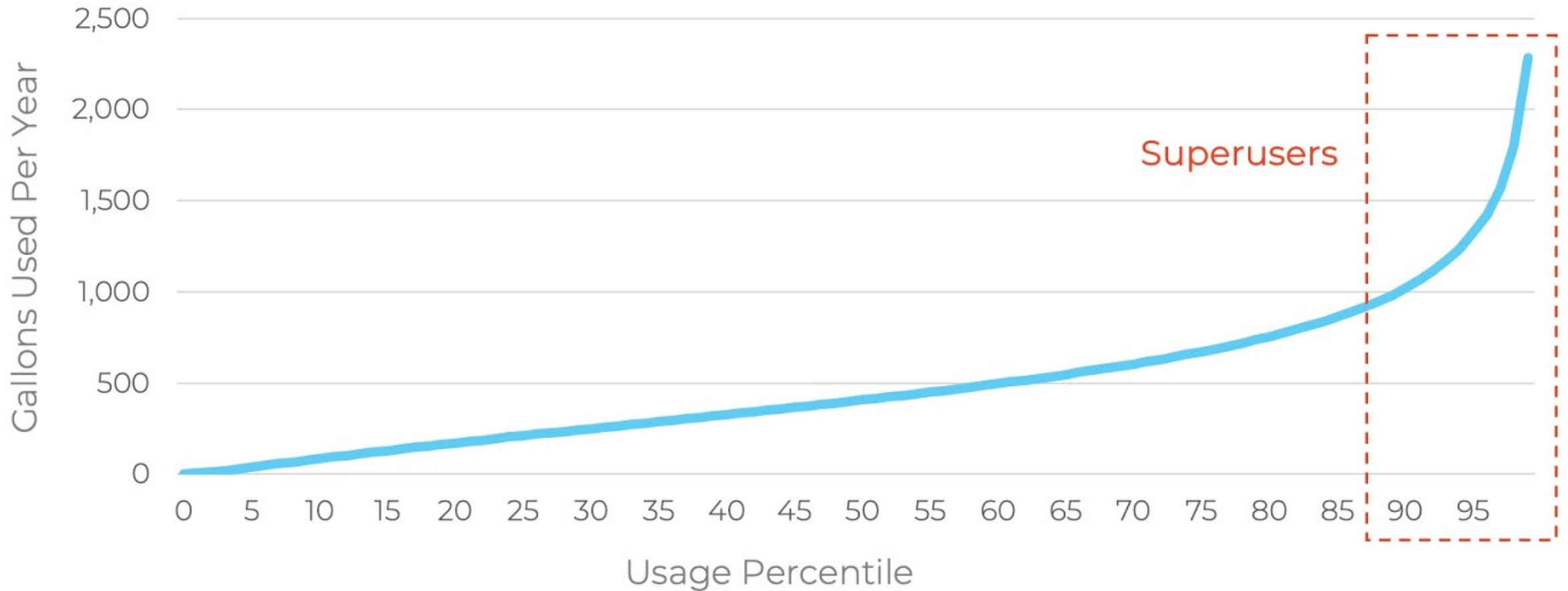


SUPERUSERS STRATEGY: SWITCH BIGGEST GASOLINE USERS TO EVs



Source: National Household Travel Survey, Coltura analysis

Annual Gasoline Use by Usage Percentile



Source: National Household Travel Survey, Coltura analysis

MARYLAND SUPERUSER STATS

- **State of Maryland**

- 10% Superusers
- Superusers use 30% of All Gasoline

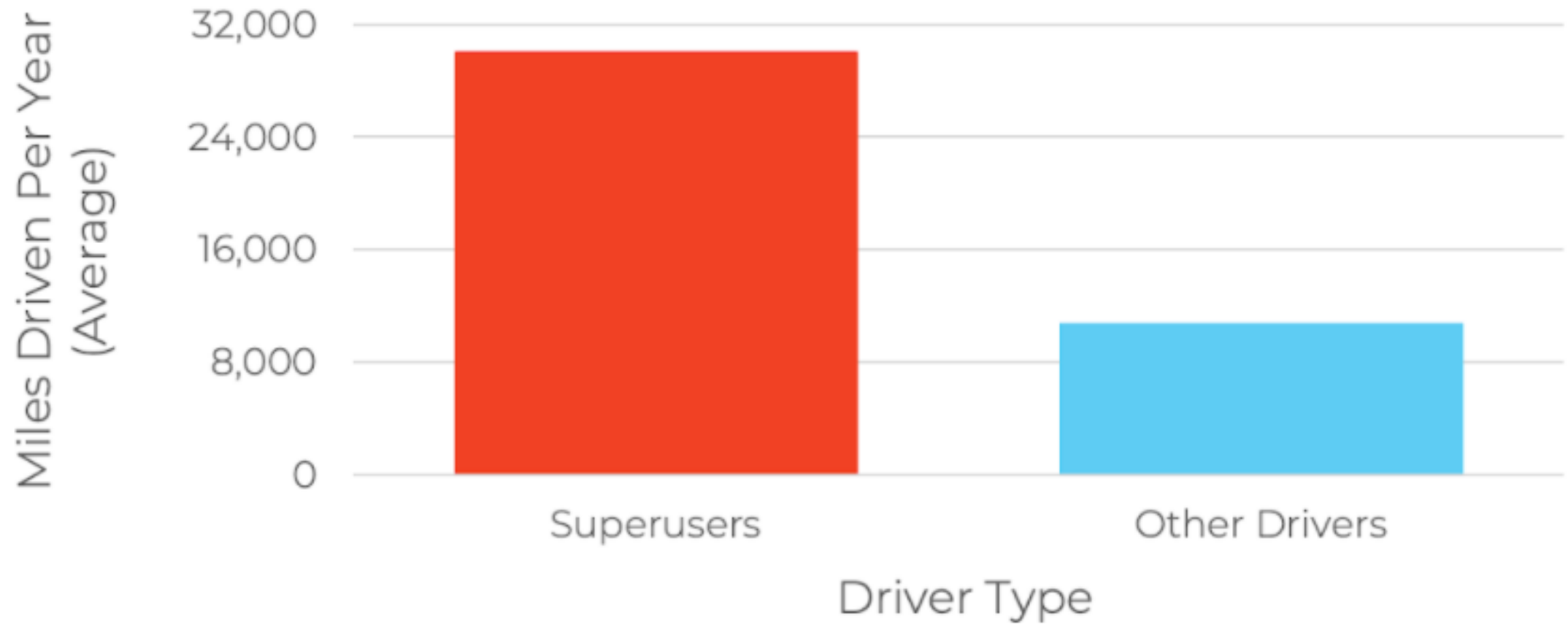
- **Baltimore-Columbia-Towson Metro Area**

- 9.92% Are “National” Superusers
- Superusers Use 28% of All Gasoline

- **Washington-Arlington-Alexandria, DC-VA-MD-WV**

- 6.64% Are “National” Superusers
- Superusers Use 22% of All Gasoline

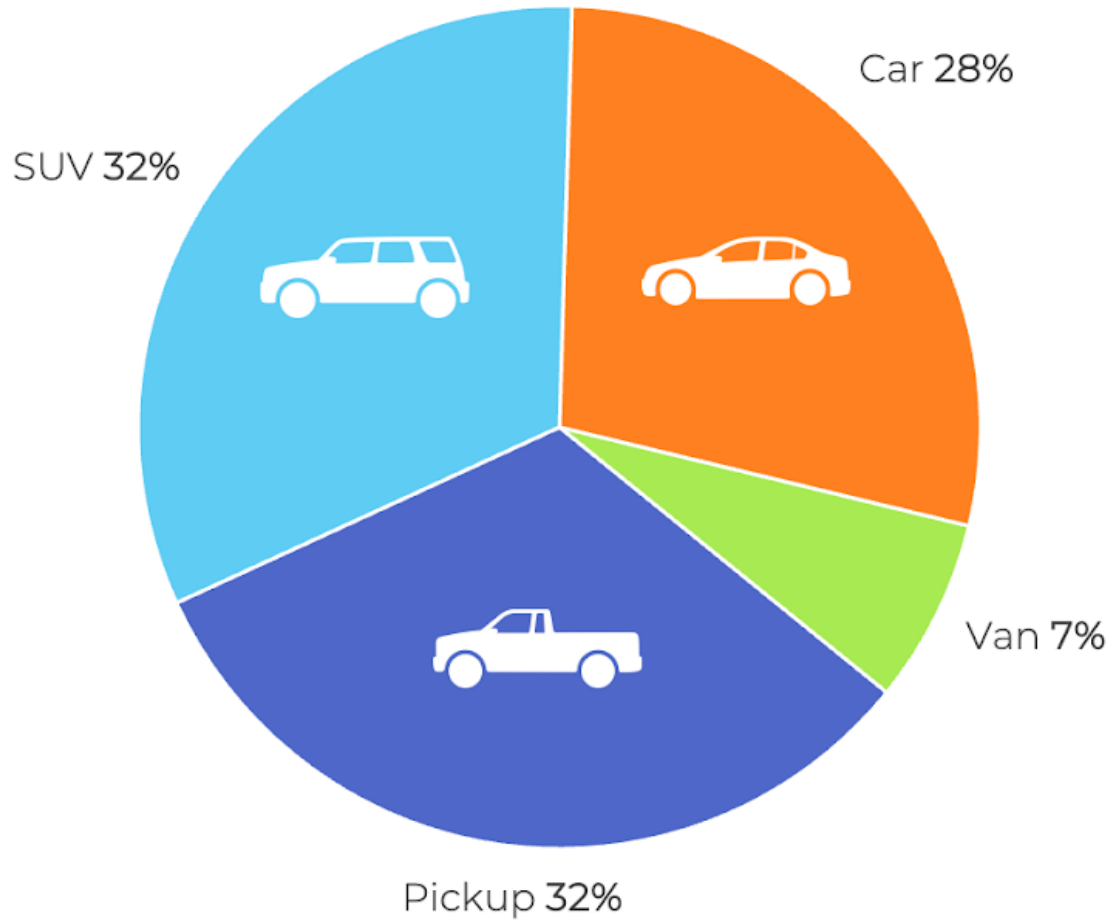
Annual Mileage



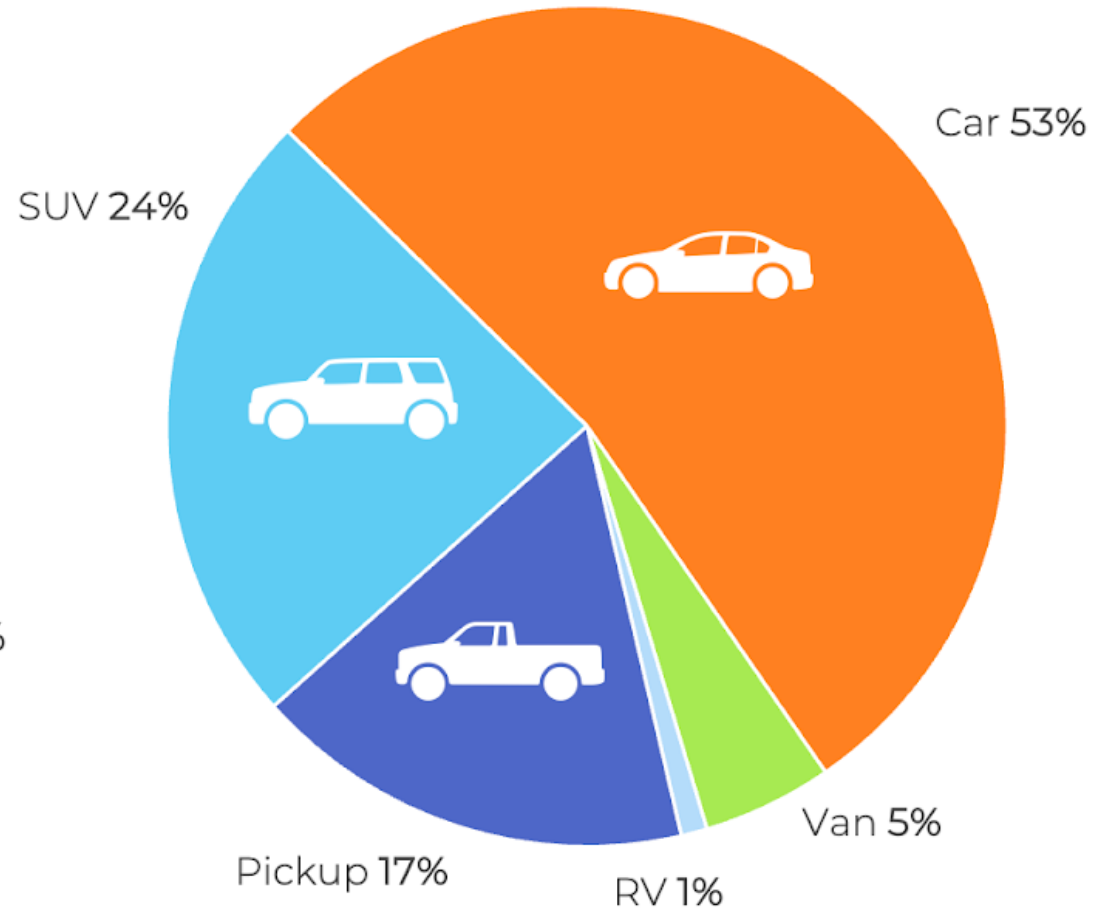
Source: National Household Travel Survey, Coltura analysis

Types of Vehicles

Superusers



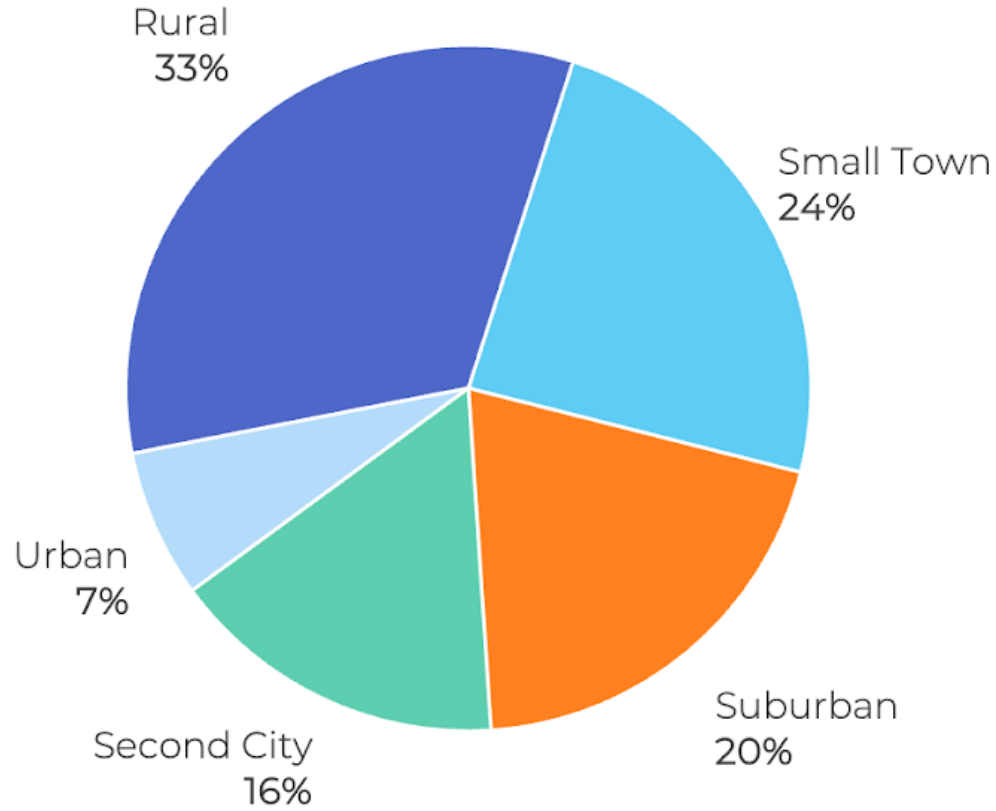
Other Drivers



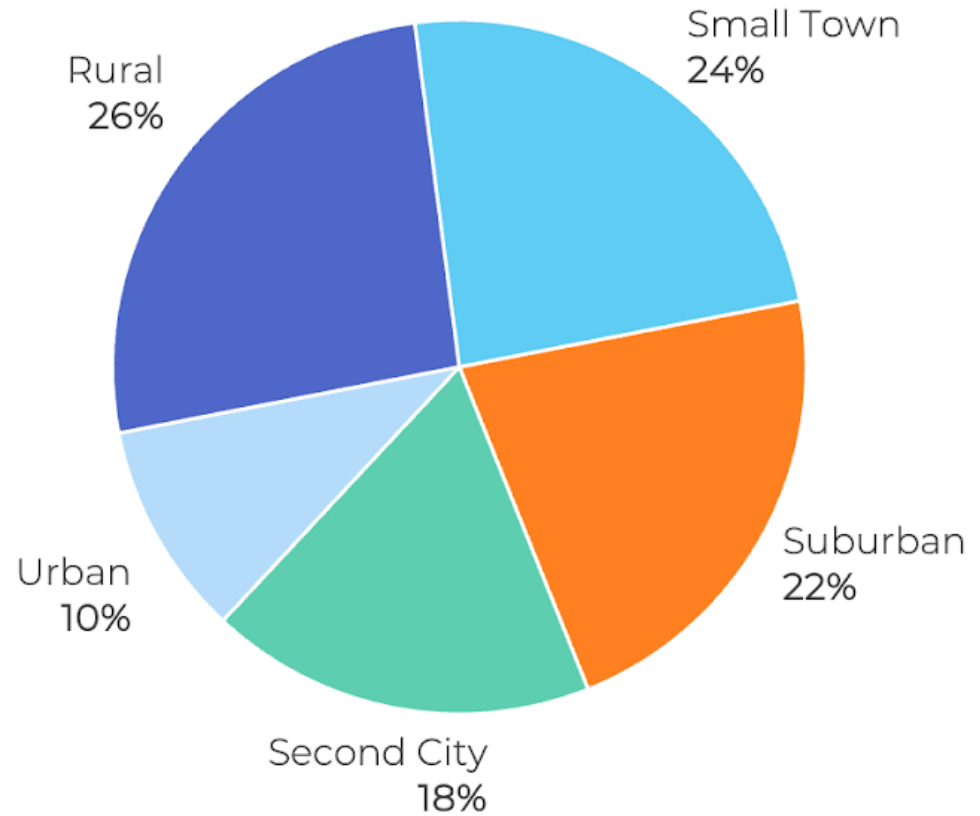
Source: National Household Travel Survey, Coltura analysis

Geographical Distribution

Superusers

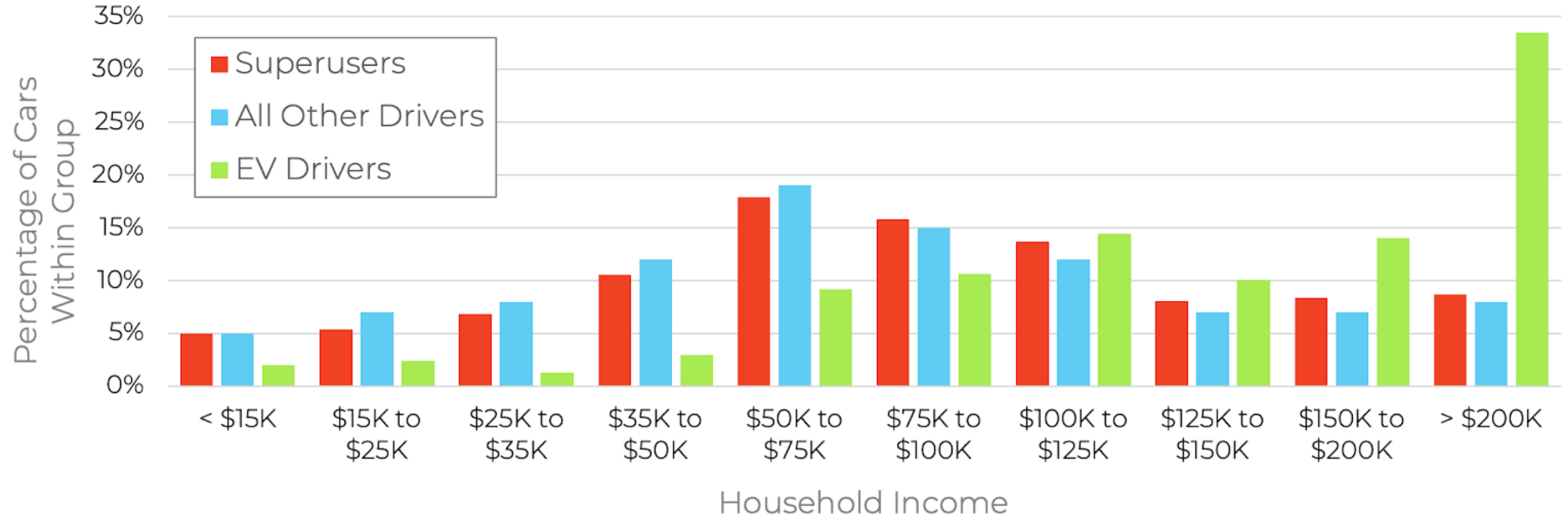


Other Drivers



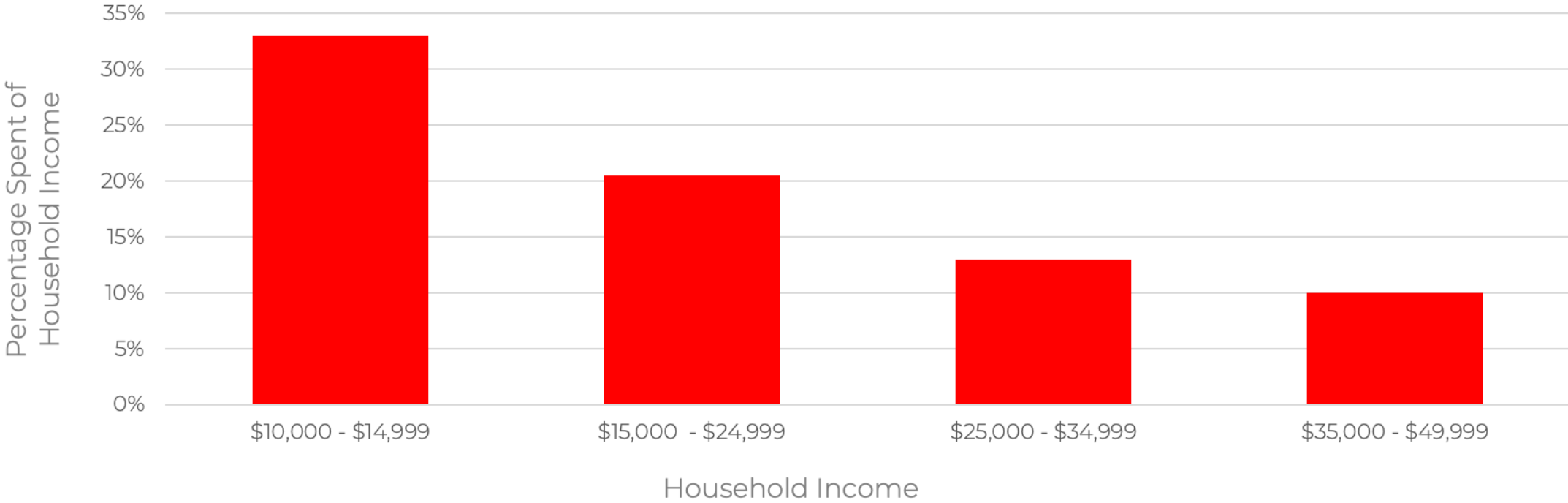
Source: National Household Travel Survey, Coltura analysis

Household Income Distribution

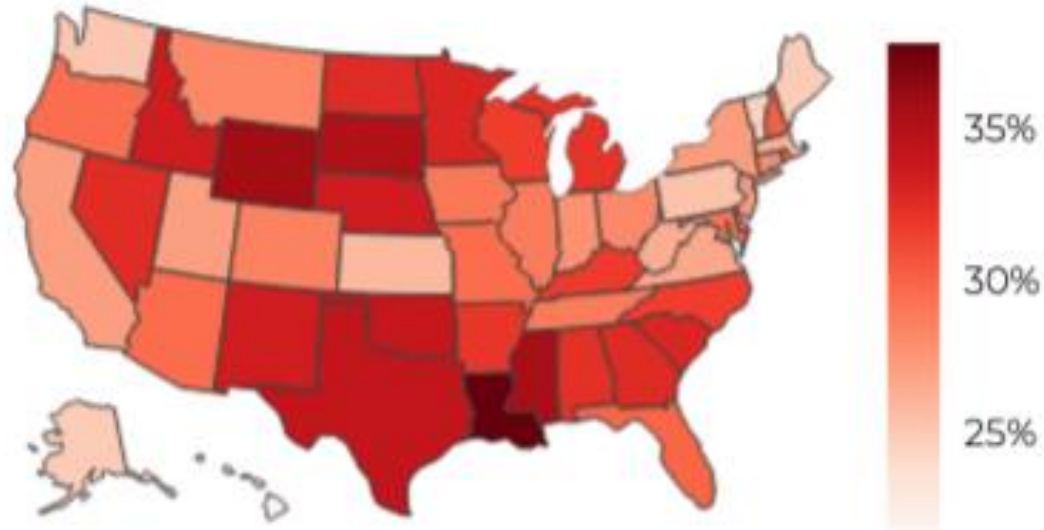


Source: National Household Travel Survey, Coltura analysis

Gasoline Costs Burden Lower-Income Superusers



Superusers' Share of State's Gasoline

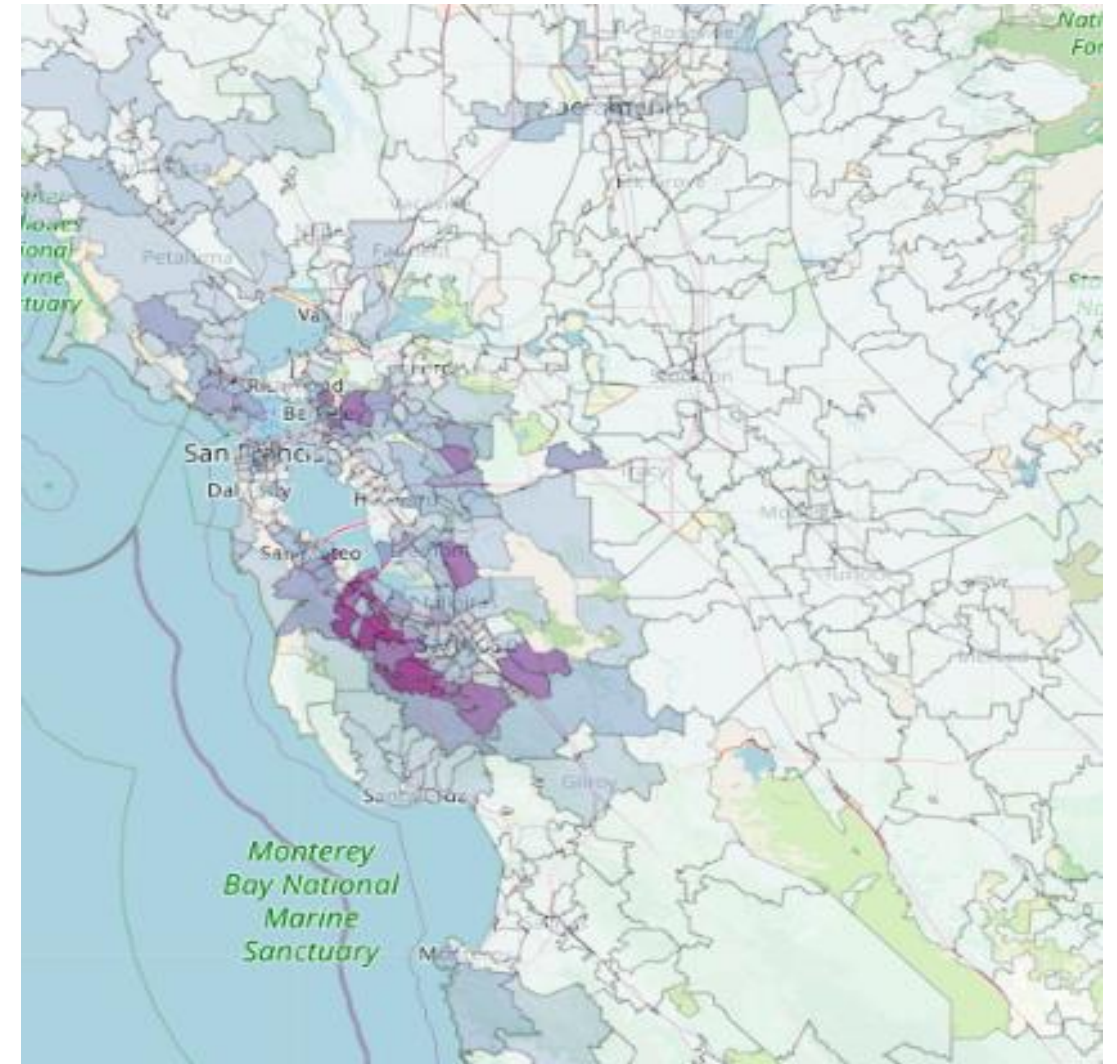
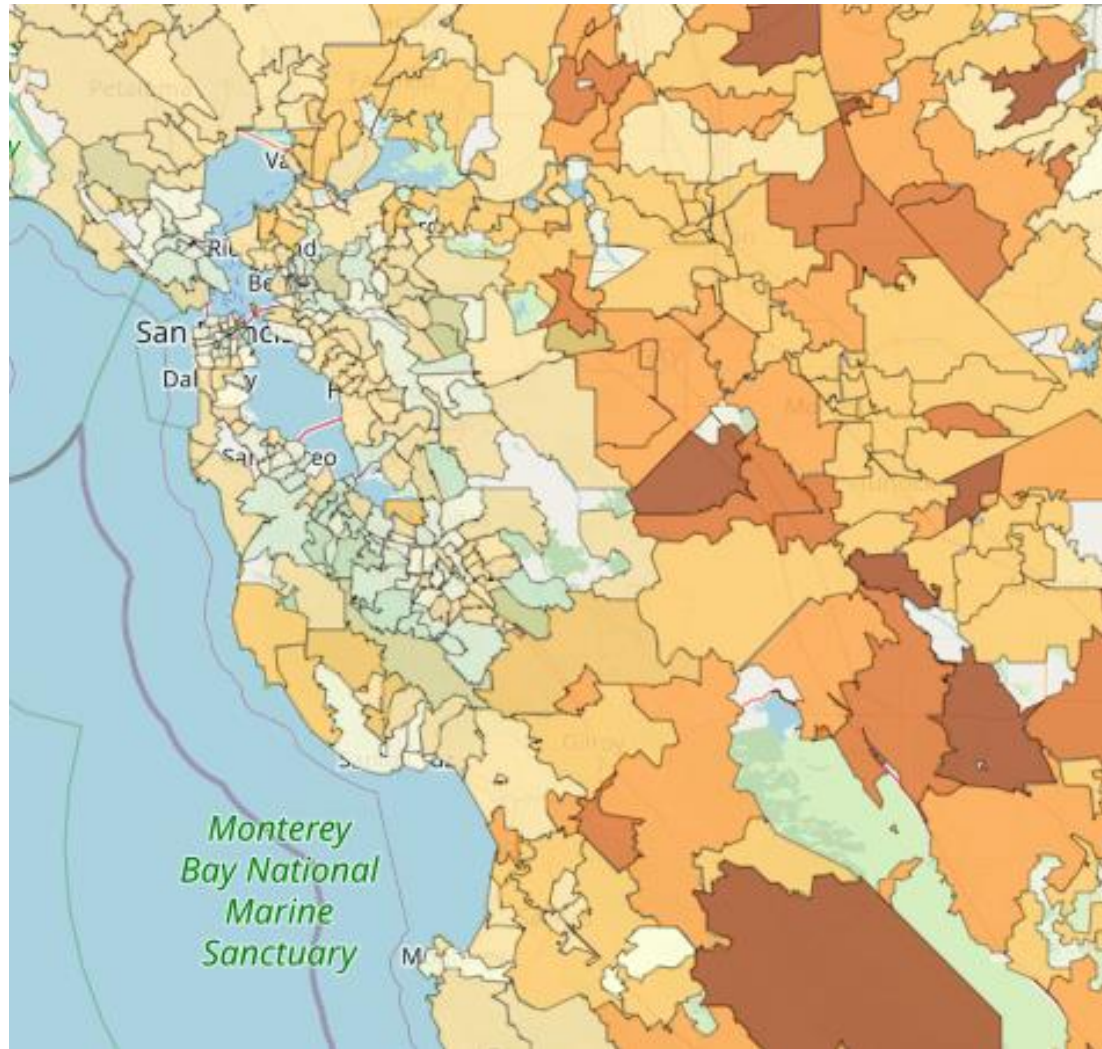


Share of EVs Registered Per State



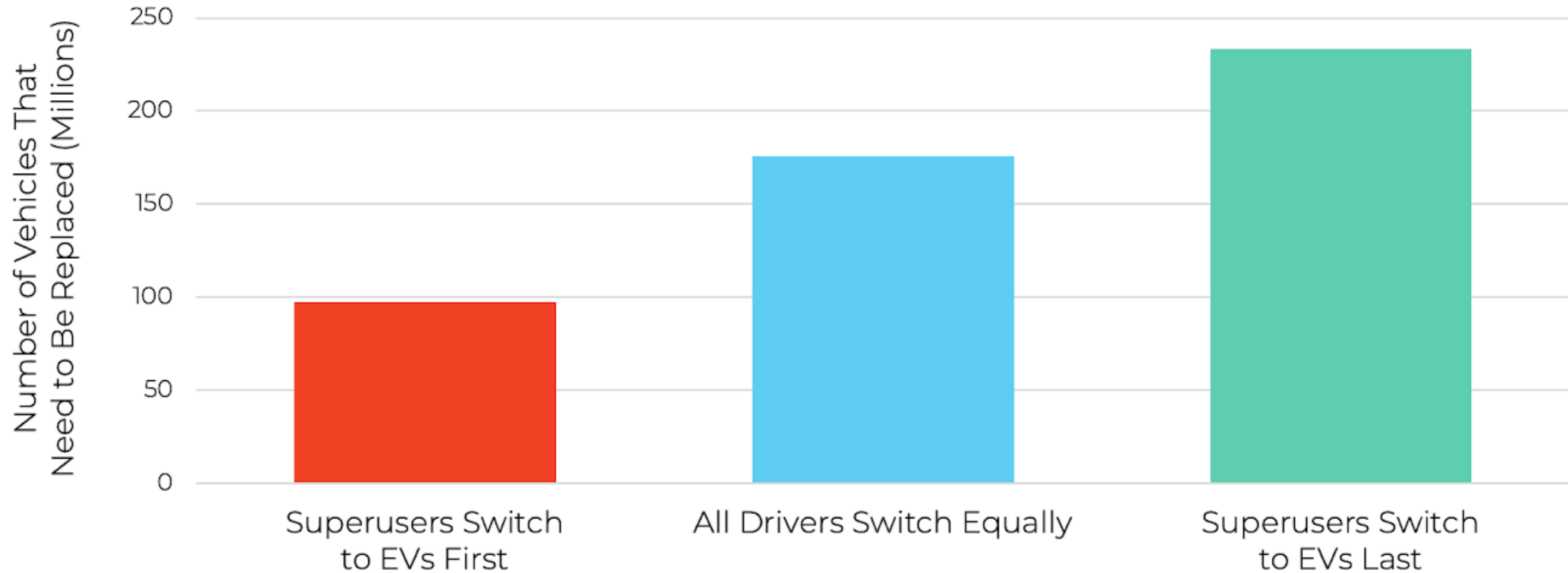
Source: National Household Travel Survey, Coltura analysis

CALIFORNIA GAS CONSUMPTION & EV HEATMAP



Climate benefit (US)

Number of Vehicles That Must Switch to EVs for 50% Emissions Cut



Source: National Household Travel Survey, Coltura analysis

STRATEGIES TO MOVE SUPERUSERS TO EVs

- **EV & Financing Incentives Proportional to Gasoline Usage**
- **Charging where Superusers Need It**
- **Public Education**

CALCULATING ANNUAL GASOLINE USAGE

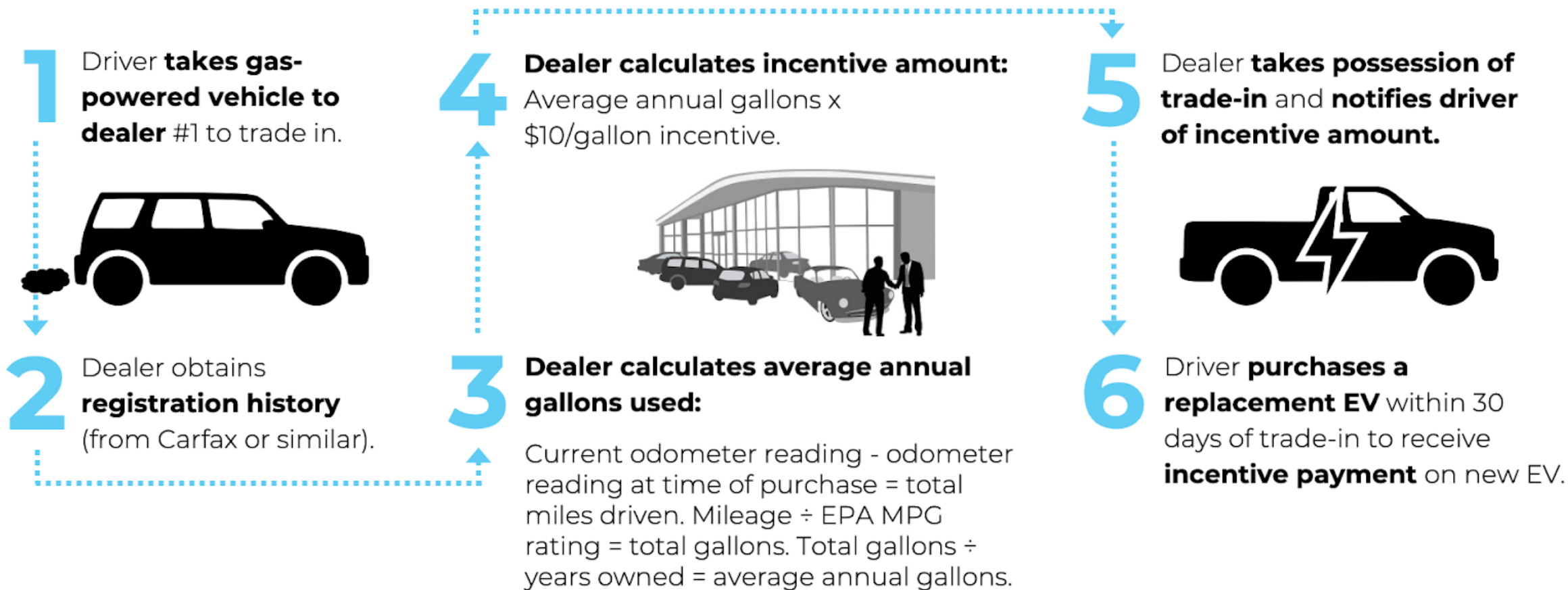
- Step 1:** Obtain odometer reading from time of vehicle purchase (available from vehicle title or Carfax)
- Step 2:** Get current odometer reading from vehicle
- Step 3:** Subtract purchase odometer reading from current reading
- Step 4:** Divide mileage by vehicle EPA MPG rating and by years of ownership

CALCULATING GASOLINE DISPLACEMENT INCENTIVE

Annual Gallons x Incentive Amount

Example: 1000 Annual Gallons Used by \$10 Gallon = \$10,000

How the Gasoline Displacement Incentive Could Work

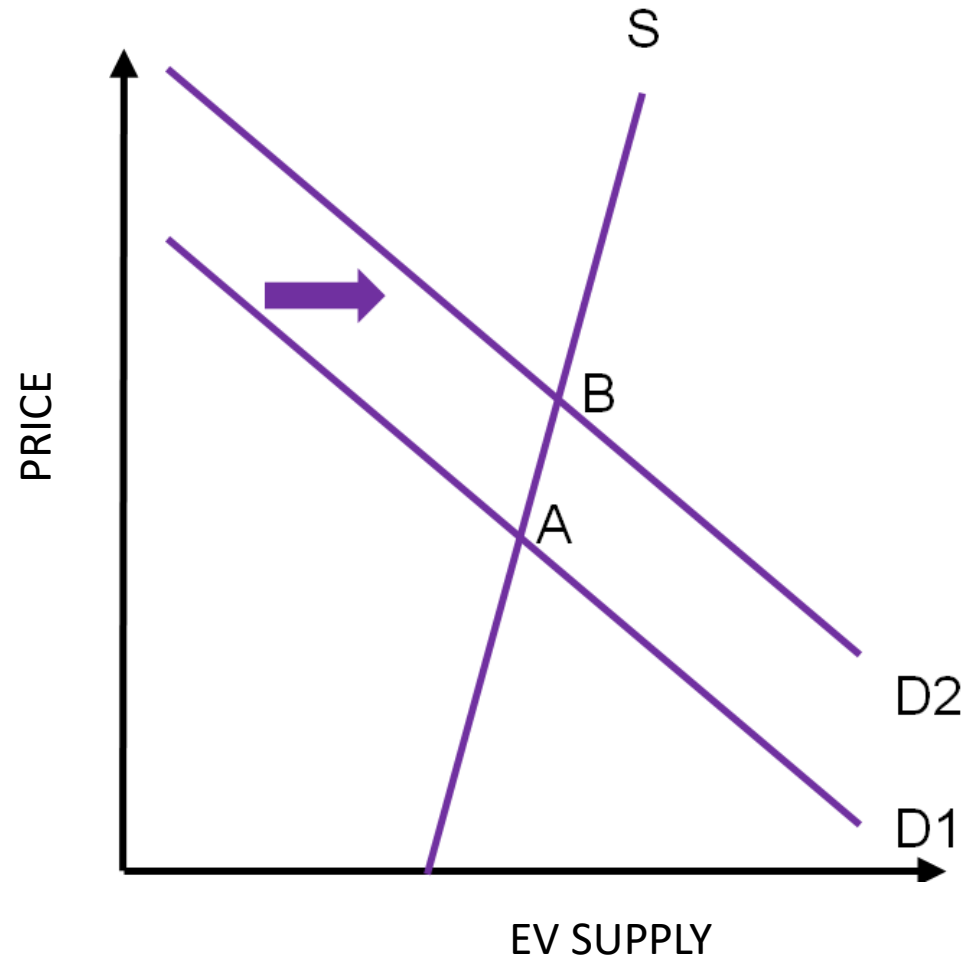


Thank You

Matthew Metz

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EV Subsidies in Supply Constrained Market Raise Prices



California Superusers Top Vehicles

Make	Model	# of Superuser Vehicles in CA
CHEVROLET	SILVERADO 1500	9358
TOYOTA	TACOMA	6105
FORD	F150	6005
	EXPLORER	5747
TOYOTA	TUNDRA	5271
HONDA	CIVIC	4833
NISSAN	ALTIMA	4332
RAM	RAM PICKUP 1500	3595
GMC	SIERRA 1500	3551
NISSAN	SENTRA	3447
JEEP	GRAND CHEROKEE	2848
DODGE	CHARGER	2800
	RAM PICKUP 1500	2627
FORD	FOCUS	2476
	F-150	2301
NISSAN	FRONTIER	2143
FORD	FUSION	2134
CHEVROLET	TAHOE	2127
HYUNDAI	SONATA	2077
GMC	YUKON	1935
HONDA	PILOT	1842
CHEVROLET	IMPALA	1784
TOYOTA	SIENNA	1709
CHEVROLET	TAHOE 1500	1670
DODGE	JOURNEY	1638
HONDA	ODYSSEY	1613
TOYOTA	COROLLA	1585
CHEVROLET	TRAVERSE	1517
VOLKSWAGEN	JETTA	1492
KIA	OPTIMA	1461
DODGE	DURANGO	1445

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CHEVROLET	MALIBU	1422
TOYOTA	HIGHLANDER	1359
DODGE	GRAND CARAVAN	1338
JEEP	WRANGLER UNLIMITED	1324
FORD	ESCAPE	1254
HYUNDAI	ELANTRA	1234
JEEP	CHEROKEE	1230
KIA	SORENTO	1214
TOYOTA	RAV4	1190
CADILLAC	ESCALADE	1184
NISSAN	VERSA	1127
CHEVROLET	CRUZE	1079
GMC	ACADIA	1037
HONDA	CR-V	956
CHEVROLET	EQUINOX	950
	AVENGER	934
	CARAVAN	924
CHEVROLET	SUBURBAN	924
NISSAN	PATHFINDER	897
CHEVROLET	COLORADO	869
KIA	SOUL	869
FORD	EDGE	863
ACURA	MDX	862
FORD	FLEX	846
NISSAN	MAXIMA	771
DODGE	DART	769
KIA	FORTE	752
CHRYSLER	200	720
VOLKSWAGEN	PASSAT	682
INFINITI	Q50	665
CHRYSLER	TOWN & COUNTRY	652
	300	612
GMC	YUKON XL	588
BMW	3 SERIES	583
FORD	MUSTANG	576
JEEP	WRANGLER UNLIMITED	566

Vehicle	2011 Nissan Rogue	2005 Toyota Highlander	2010 Toyota Tacoma
Annual mileage	6,000	10,000	45,000
Annual gallons displaced	259	468	2,335
EV incentive @ \$10/gallon displaced	\$2,590	\$4,680	\$23,350
Monthly fuel savings with EV	\$50	\$93	\$475
Monthly maintenance savings with EV	\$15	\$25	\$113
Trade-in value (per Consumer Reports)	\$5,185	\$3,090	\$10,425
Similar EV	Hyundai Kona EV	Tesla Model Y	Ford F-150E
Price of EV	\$40,000	\$55,000	\$44,000
Net EV cost after incentive and trade-in	\$32,225	\$47,230	\$10,225
Monthly car payment on EV (assume 6 years @ 5%)	\$529	\$775	\$168
Monthly cost (savings) to switch to EV	\$464	\$658	(\$420)
Taxpayer cost per gallon displaced under existing flat \$7,500 tax incentive	\$29	\$16	\$3

Should My Mom & Ed Get Same EV Incentive?



Used 100 gallons of gasoline a year



Uses 1200 gallons a year

ZEV Sales Requirements: Share of ZEV vs ICE

