



MEMO

TO: Interested Parties
FROM: Alliance for Automotive Innovation
DATE: December 11, 2024
RE: It's gonna take a miracle: California and states with EV sales requirements

There are two sets of vehicle emissions rules in the United States today:

A federal program (overseen mostly by the Environmental Protection Agency) and a little-known state program (set by the California Air Resources Board and adopted by 11 states).

Both regimes target a reduction in vehicle greenhouse gas emissions and improvements in fuel economy. The big difference? How they require automakers to get there.

Performance standard vs. sell more electric vehicles

The federal program sets a performance standard for the U.S. vehicle fleet. Automakers are obligated to sell vehicle fleets that on average meet specific grams per mile emissions targets or miles per gallon of fuel economy.

Automakers can meet the federal standards by selling a variety of vehicle types: battery electric, traditional or plug-in hybrid, fuel cell or fuel-efficient gas-powered vehicles. In other words, a mix of powertrains.

California's [Advanced Clean Cars II](#) program takes a different approach. It requires automakers to sell a specific (and escalating) percentage of zero emission vehicles starting in model year 2026 through 2035 when *100 percent* of new vehicle sales must be ZEV.

ACC II is an actual electrification sales mandate and ultimately a ban on the sale of new gas-powered vehicles. The reach of California's EV mandate is not well understood by policymakers or consumers.

"You can't get ahead of the customer. The customer is in charge."

**-John Bozzella, president and CEO,
Alliance for Automotive Innovation**

States can either follow the federal program (about 70 percent of the country does) or adopt the California program (the other 30 percent). One or the other. There's no option to choose something in between.

The 11 states following California's lead aren't accountable to California or the EPA. They're part of a program that is an unaccountable, unachievable regulatory wormhole.

The 'California' issue will dominate electrified vehicle policy (and politics) in the year ahead.

The following memo has details on the program and what policymakers can do about it.



How did we get two vehicle emissions programs?

Under the Clean Air Act, vehicle tailpipe emissions rules are set by the federal government (EPA) and govern all vehicles sold in the U.S.

There's an exception. The law allows California to set its own emissions standards using waiver authority from the federal government.

President Obama granted California a waiver. President Trump rescinded it. President Biden reinstated the waiver for a prior version of the regulation and is likely to issue another one for ACC II before leaving office. President Trump will likely rescind it again. Then it inevitably heads to the courts. For automakers and consumers... it's ping pong.

Section 177 of the Clean Air Act allows states to adopt the *identical vehicle standards* set by California. About 30 percent of the U.S. vehicle market (11 states plus California) have adopted those standards.

Call them the 'California states' or the '177 states...'

What are the rules in California and the 177 states?

The 177 states follow California's ACC II program, essentially a requirement that 100 percent of new vehicle sales be zero emission by 2035. The number of gas-powered vehicles sold in 177 states must similarly decline every year between 2026-2035 as well.

This is an EV sales requirement that falls on automakers. California can fine automakers that don't meet the sales targets.

California, Oregon, Washington State, New York, Massachusetts and Vermont have adopted ACC II starting in model year 2026.

Colorado, New Jersey, Delaware, Rhode Island, New Mexico and Maryland join the program in model year 2027.

How is California/ACC II different from the federal rules?

In 2024, EPA set greenhouse gas and criteria pollutant rules that target about 50 percent EV sales in 2030 by requiring automakers to meet a fleet-wide performance standard.

Given the scale of the industrial base transformation, the lack of available public charging, supply chains still coming online and consumer caution, we concluded the rules were going to be a major stretch but on "[the ragged edge of achievable...](#)"

Think of 177 state ZEV sales requirements like a ratio: EVs sold over TOTAL vehicles sold.

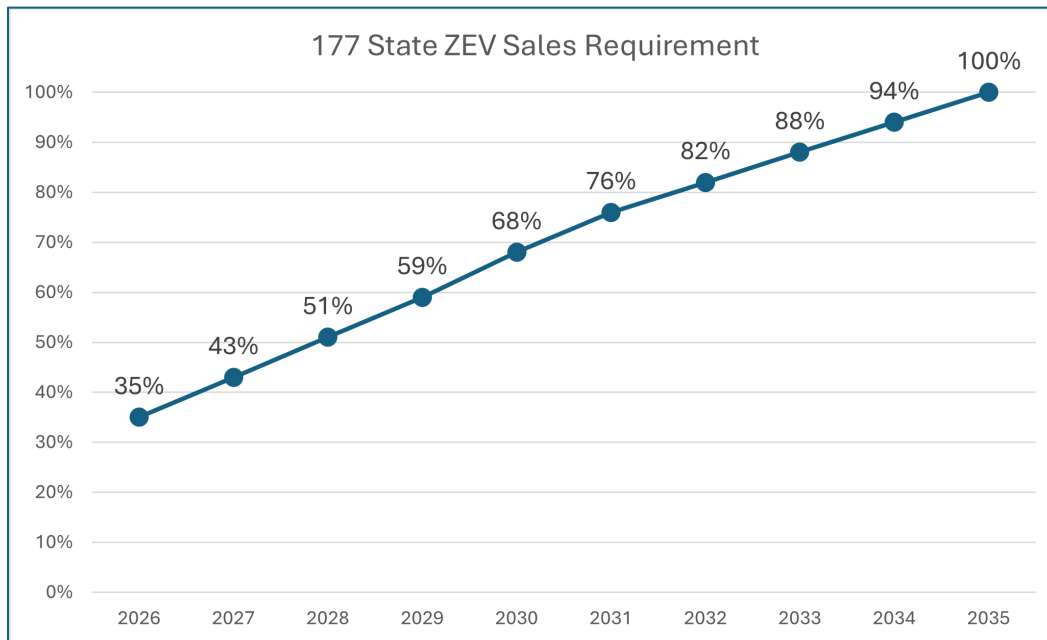
The California state sales requirements are fraction or a ratio. (Dust off your high school math, you'll need it later...)



The numerator is the number of electrified vehicles that MUST be sold in a 177 state in each of the coming years. The denominator is the total number of vehicles sold in that state.

In model year 2026 (calendar year 2025 for automakers) 35 out of 100 vehicles sold by every automaker doing business in a California/177 state must be a ZEV.

In model year 2027: 43 out of 100 vehicles must be electrified; in 2028: 51 out of 100 vehicles; 59 in 2029; 68 in 2030; 76 in 2031... and 100 out of 100 vehicles in model year 2035.



Is it feasible? Case study: California vs. New York.

Let's look at two big states following the ACC II program: California and New York.

California is the [top EV state](#) in the country. (Colorado just announced it passed California and [reached 25.3 percent EV sales](#) in the third quarter).

California has invested in EV charging and various incentives for a generation. It shows. EV market share in California is almost 26 percent. ACC II regulations require California to be at 35 percent ZEV in model year 2026 (basically *next year*).

New York hasn't invested in electrification like California. Market share there is approaching 10 percent (13th out of 50 states). Regulations require New York to also be at 35 percent ZEV sales *next year*.

That's going to take a miracle. New York is *not* ready to meet the ZEV sales requirements of the ACC II program. They're not alone. Neither are most 177 states.



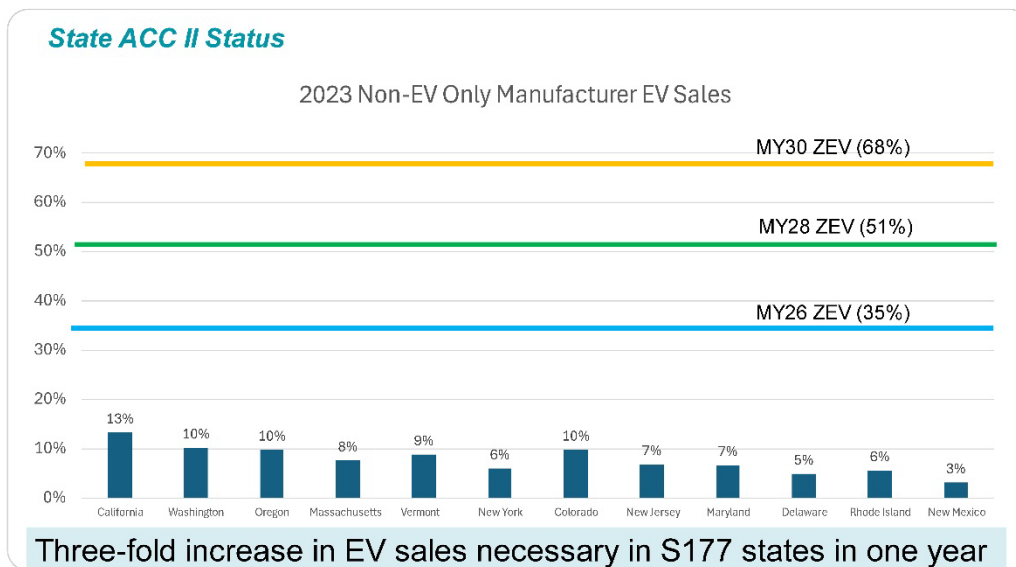
But the regulations *require* each automaker to sell 35 percent, 43 percent, 51 percent... and eventually 100 percent ZEVs in each 177 state, right?

Yes, they do.

Keep in mind, it's not *automakers* in total. EACH automaker *individually* must meet the requirements.

And if you look at incumbent auto manufacturer EV market share in the 177 states (and back out sales from new entrants and EV-only manufacturers like Tesla and Rivian) you get a sense of how steep the climb.

In California, incumbent automaker EV market share is 13 percent. By model year 2026, incumbent automakers must grow EV sales by 2.7 times (in the top EV state in the country...) and even more in each of the other 177 states where sales already lag California.



Will automakers be able to meet these sales requirements?

That's a good question... for policymakers. But it's not likely.

Remember the EV sales requirements are a ratio: EVs over ALL vehicles sold. Automakers have three options to meet the ratio.

Option 1: Sell *more* electrified vehicles (increase the numerator).

Option 2: Sell *fewer* total vehicles (decrease the denominator).

Option 3: Buy credits from automakers that over comply with 177 state ZEV sales requirements. (Translation: pay Tesla/Elon Musk.)



Let's use New York as an example. Here's where you need your algebra...

- Option 1, sell more EVs:

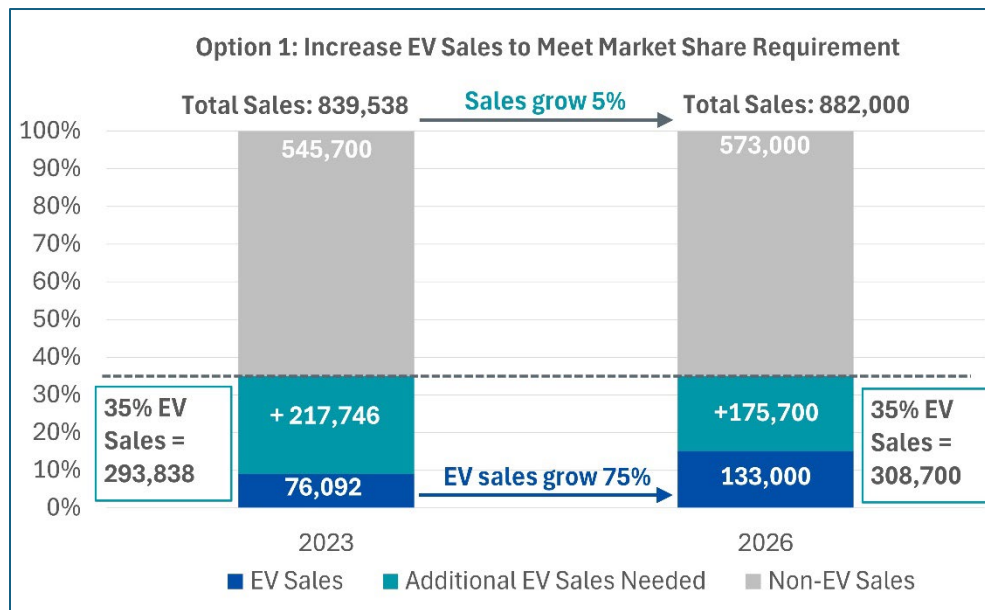
In 2023, there were about 76,000 EVs sold in New York. Total vehicles sold in New York in 2023: 840,000. That's about 9 percent market share.

EV sales growth in New York (the average over the last three years) was 66 percent. Let's assume New York has a good year, and EV sales grow organically 75 percent by 2026 (57,000 additional vehicles).

New York would sell 133,000 EVs (76K + 57K) in 2026. That's the numerator.

Total vehicle sales (the denominator) are likely to be flat based on recent trends, but say there's 5 percent overall vehicle sales growth by 2026. That's 882,000 vehicles.

Thirty-five percent (the EV sales requirement) of 882,000 is 309,000 vehicles. That means New York would fall about 176,000 electrified vehicles short of what is required. (309,000 ZEV sales required – 133,000 sold).



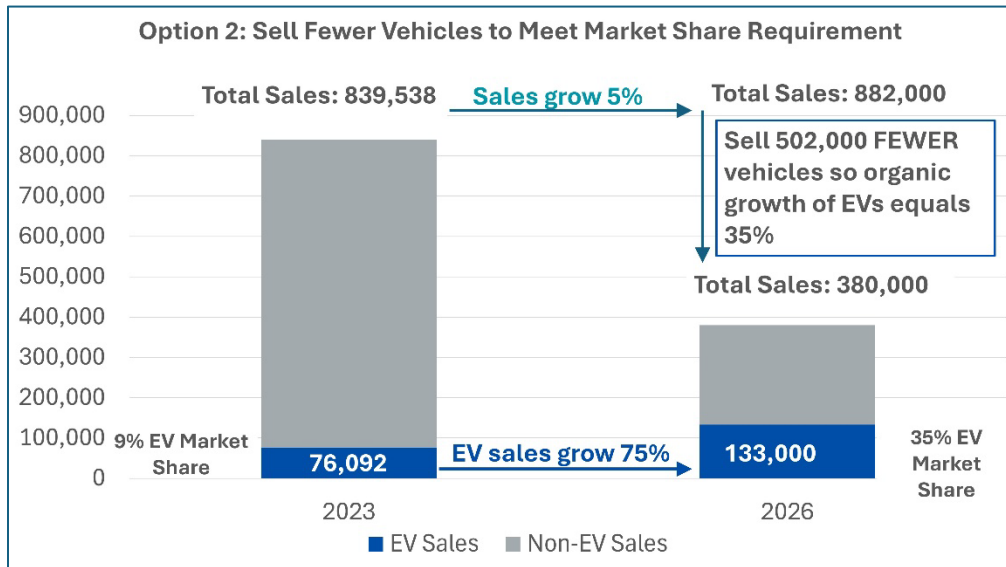
- Option 2, sell fewer TOTAL vehicles (shrink the pie):

Use the same New York figures. 133,000 EVs sold in 2026 (organic growth) out of 882,000 total vehicles. That's about 15 percent.



For automakers to meet the 35 percent EV sales requirement for model year 2026 with the projected sale of 133,000 EVs, automakers would have to reduce the total number of vehicles sold in New York to 380,000 (133,000 = 35 percent of 380,000) → $133,000 = .35x \mid x = 380,000$.

Remember, based on current sales trajectories we projected New York would sell 882,000 total vehicles in 2026. That means automakers would have to sell 502,000 FEWER vehicles to meet the EV sales requirement. (882,000 vehicles sold – 380,000 = 502,000).



In other words, to comply with the rules, automakers would have to sell half a million *fewer* vehicles to achieve the required California/177 state ratio in 2026. And it gets tougher and tougher in each of the coming years as the sales mandates get stricter in every 177 state.

By the way, we know what constricting vehicle supply does to vehicle price (see: pandemic).

Not hypothetical: [Stellantis may ship fewer gas-powered vehicles to US states with strict emissions rules](#) and [These blue states are hesitating to follow California](#).

Option 3: buy credits (from Tesla).

California regulators would say there’s a third option for automakers: buy credits.

Purchasing regulatory credits when you don’t comply with certain emissions targets or regulations has been in place for years at the state and federal level.

It’s an opaque ‘marketplace’ but allows incumbent automakers to purchase regulatory offsets from automakers that over comply with ZEV mandates (naturally, EV only automakers).

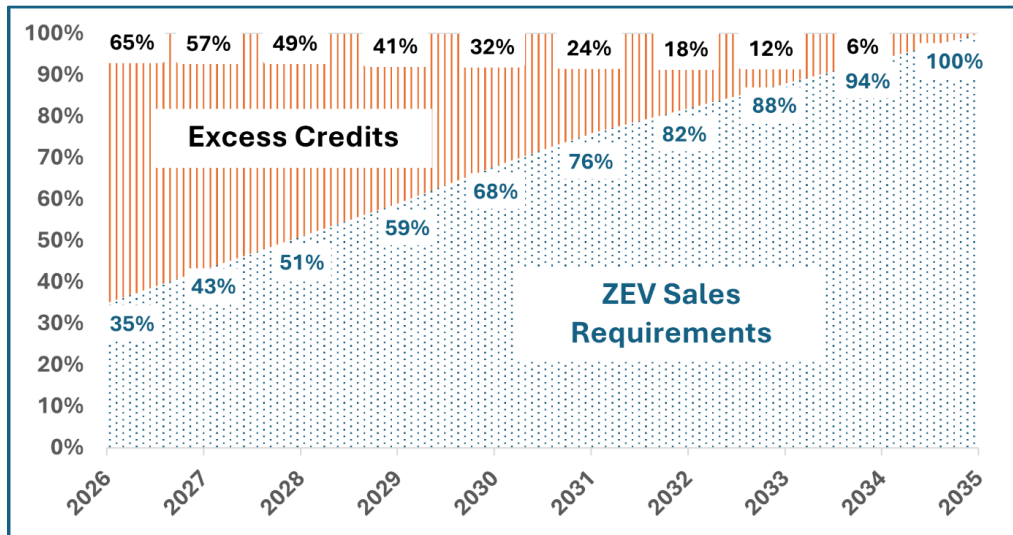


There are all kinds of formulas and averaging and flexibilities related to credits for automakers to meet ZEV requirements. Good rule of thumb: in model year 2026, 1 vehicle = 1 credit.

Here's what to know:

The credits are costly and divert finite capital automakers need for the expensive EV transition.

The market isn't particularly transparent and the number of credits available in the coming years will decrease.



And the money spent to buy compliance credits doesn't go toward improving EV charging infrastructure or utility upgrades or expanding customer incentives (something that you could at least make a case would accelerate EV adoption... over the long-term).

Payments go directly to Tesla and other automakers 'over complying' with the mandates because... they *only sell EVs*. Tesla's [revenue](#) from regulatory credits in the third quarter was \$739 million – the second highest quarter in company history.

So what?

The California/177 states are telling automakers what kind of vehicles to sell under a program that is an unaccountable, unachievable regulatory wormhole. Participating states aren't accountable to California... and they're not accountable to the EPA either.

Factor in a lack of public charging and customers who aren't quite ready to make the switch to EVs and you see how the policy is totally out of whack (not to mention beginning next year).



The program will depress economic activity, increase costs and limit vehicle choice.

Compliance will force automakers to sell fewer vehicles in California/177 states. This will increase prices and depress economic activity and tax revenue.

It will decrease overall vehicle options and choice for customers.

It will force consumers to cross state lines and purchase vehicles in states that don't follow the program. (Auto dealers operating in California/177 states will *love* that, right?)

If the ZEV sales requirements aren't realistic... what's the fix?

Governors, state legislatures or the relevant state regulatory agencies (depending on how each state originally adopted the plan) have two choices:

Pull their states from the program or double-down and make major EV investments and try to make the regulations achievable. (See: [Colorado](#)).

Some states have already signaled an openness to adjustments. Colorado, Delaware and New Mexico will stay in the program until model year 2032 and top out with an 82 percent ZEV sales mandate. To their credit, they determined a full gas-powered vehicle ban wouldn't work.

What do regulators say? Figure it out.

Alliance for Automotive Innovation recently raised feasibility concerns with California and 177 state governors and recommended a course correction. We said no incumbent automaker is going to have an easy time complying with these sales mandates. Certainly not under current market circumstances.

California's regulators said (more or less): figure it out. We're gonna keep pushing you... automakers can get there.

Really? *Passing a law* that requires 100 percent electric vehicles in 10 years is the easy part.

Automakers can produce electrified vehicles, but there's a huge gap between these 177 state requirements and a customer's (reasonable) expectation they can still choose what kind of vehicle to drive.

The California/177 states are NOT ready for these requirements. Achieving the mandates will take a miracle. There needs to be balance and some states should exit the program.

Automakers are adjusting. 177 state policymakers should too.

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