

CARB ZEV Mandate Opinion

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CARB ZEV Mandate Coverage

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CARB ZEV Mandate Opinion

Washington Post, August 25, 2022

California's plan to ban new gas-powered cars is misguided

By Henry Olsen

Henry.Olsen@washpost.com

California is once again trying to use government mandates to force its residents to help fight climate change. The state's latest installment in this long-running play, a new rule [banning the sale](#) of new gas-powered vehicles by 2035, is likely to be as much a failure as its previous efforts were.

The proposal is a classic exercise of hubris. The thinking goes like this: The state wants to reduce greenhouse gas emissions, and many of those come from cars and trucks. Therefore, if it bans the sale of new cars that emit those gasses, the people will follow along without much complaint. Cars become electric, greenhouse gas emissions go down and the problem is solved.

The problem comes from that little variable the state's bureaucrats overlook: the people. The vast majority of people buy cars and trucks to get from one place to another, not to serve some lofty climate goal. They also balance the costs of transportation against other goods, like housing and food. If transportation costs rise, they look for ways to cut them to maintain consumption elsewhere. That's basic economics.

People buy gas-powered cars today in large part because they are cheaper than electric ones. Prices for electric vehicles are substantially higher than for equivalent gas-powered models. The average EV is [about \\$10,000](#) more expensive upfront, a massive amount for the average household and an insuperable one for low-income households. Even the new, more restrictive \$7,500 per vehicle tax credit doesn't fully eliminate the upfront price disadvantage that discourages EV purchase. Fuel and maintenance costs are usually lower for electric vehicles than for gas-powered cars, but it still takes years for owners to recoup the heavy upfront price premium.

Then there's the battery life and depletion problem. Batteries of all types eventually lose their ability to store electricity, and vehicle batteries are no exception. The longer you own an EV, the more the battery will deplete and require frequent recharging. This happens more quickly in [places with extreme heat or cold](#) — which is to say, most places in the United States outside of California. That means an owner will either have to recharge their car more frequently, raising operating costs, or even replace their battery

at substantial costs. Manufacturers typically warranty their battery for 10 years or 100,000 miles, but that's little comfort for someone who expects to drive their vehicle beyond those points.

Then you get the problem of convenience. Gas-powered cars can run for hundreds of miles without needing refueling, and filling the tank takes only a few minutes. EVs are catching up on the ability to go long distances, but they can't come close to matching the refueling advantage gas-powered cars have. Even with a Level 2 charger, which itself costs hundreds — or thousands — of dollars to purchase and install in one's home, it takes hours to fully recharge a drained battery. That's a matter of hard physical science, not economics, making EVs a problematic purchase for households that drive long distances frequently.

Getting around this by purchasing a plug-in hybrid, a combination electric- and gas-powered car that the new rule would permit, reduces the impact on climate change the rule-makers are trying to achieve. And the rule also includes a minimum electric range requirement — 50 miles — that new plug-in hybrids would have to meet to be sold in 2035. Almost no current models meet that Olympian standard.

Regulators surely expect their mandate to drive cost reductions and technology improvements that can mitigate over time these barriers to EV adoption. But the rule contains its own self-destructive clause by allowing the sale of used gas-powered vehicles. Used vehicles are already about [70 percent of all annual vehicles sales](#). Drivers who can't afford new EVs will increasingly turn to the used market to get the gas-powered car they really want. That will in turn reduce the demand signals regulators hope to generate to force auto manufacturers to improve EV technology. It's like they punched their own holes in a hose even as they plan to try to push more water through it.

California's insistence on top-down mandates is all the more surprising given its own checkered experience with such measures. The state promulgated a [Low Emission Vehicle mandate in 1990](#), intending to drive demand and technological change in gas-powered cars to lower conventional pollutant emissions. The rule flopped spectacularly as demand for the new cars remained low and manufacturers could not economically produce the desired technological improvements. The rule was watered down considerably, and an analysis by the Public Policy Institute of California found that most of the environmental improvements over time came from vehicle changes unrelated to the rule's strictures.

This gap between hope and reality is endemic in climate change policy. People have minds of their own and balance climate goals against a host of other considerations. If achieving climate aspirations costs too much, most people will abandon them in favor of other, more personally important goals. That is a reality that can only be overcome by force, much as government can compel behavior during wartime by rationing and price controls. The fact that there's no political will to impose those measures on recalcitrant Americans means that climate policies like California's will inevitably fail to reach their goals.

California's new electric car mandate is inspired by the best of intentions. But its ignorance of human nature and economics means it's likely to be just another case of [California dreamin'](#).

Henry Olsen is a Washington Post columnist.

CARB ZEV Mandate Coverage

New York Times, August 25, 2022

[California E.V. Mandate Finds a Receptive Auto Industry](#)

By Neal E. Boudette

neal.boudette@nytimes.com

For years, as California has moved ahead with ambitious clean-air regulations, the state has had to prod the auto industry to go along. Now, in the push to electrify the nation's car fleet, it is California that is keeping up with automakers.

Even before state regulators [acted Thursday to ban sales of new internal-combustion vehicles](#) by 2035, Detroit's Big 3 and their international rivals were setting increasingly aggressive targets for exclusively electric product lines.

But while the goals of automakers and regulators are aligned, mass production of affordable electric cars — which requires reconceiving the supply chains and engineering developed for internal-combustion vehicles — will not be easy.

The automakers are hurrying to close deals with mining companies and other suppliers that can meet the escalating demand for battery materials. Some are teaming up with smaller companies to expedite the build-out of a nationwide charging network. And they are breaking up their own corporate structures and refashioning them to ensure that the electric vehicle transition is not held back by the conventions of making gasoline-powered products.

"To move everything to E.V.s in California doesn't seem outlandish and unattainable right now," said Jessica Caldwell, executive director of insights at Edmunds, an auto-market researcher. "But I'm sure each automaker will face challenges to achieve their targets, and a few may even struggle a bit."

The 2035 mandate, adopted by the California Air Resources Board, adds to momentum for electric cars already coming from the federal government. The climate and energy package signed by President Biden this month [expands tax credits available to electric-vehicle buyers](#), but includes made-in-America requirements for E.V. components that many manufacturers will have trouble achieving.

Daniel Sperling, a member of the California board, said he expected pushback on the regulatory change from those with different ideological views. But he said it was a crucial step in reducing carbon emissions and stemming global warming.

"This is the most important and most transformative action that CARB has ever taken," he said. "This is good not just for the environment but for the economy."

Early last year, General Motors said [it aimed to sell only electric vehicles](#) starting in 2035. California's mandate "marries quite well with G.M.'s business plans," Omar Vargas, head of global public policy at the company, said during an [online discussion](#) this week organized by The New York Times.

On the way to its ultimate goal, the California rule requires that 35 percent of new passenger vehicles sold by 2026 — and 68 percent by 2030 — produce no carbon emissions.

Including hybrids, [more than one million electric vehicles have been sold](#) in California, according to the state's Energy Commission. [About 15 percent of new cars](#) sold there in the first half of this year were electric models, up from 9.5 percent in 2021, the California New Car Dealers Association reported.

But the state's standards are crucial not just because of its big population. To address its longstanding air-quality problems, California is permitted by law to set tougher environmental standards for automobiles than federal regulations establish. More than a dozen states usually follow its lead, adding up to a third of the U.S. auto market. And automakers want to conform to a single playbook.

Anticipating new regulations and determined to both create and meet consumer demand, big automakers have established their own timelines for a complete shift to E.V.s. Ford Motor has said it wants electric vehicles to make up 40 percent of its sales by 2030 and aims to make two million E.V.s a

year by 2026. Volkswagen plans to stop selling gasoline vehicles in Europe between 2033 and 2035, and its Audi division intends to introduce only electric models starting in 2026.

Those automakers and many others are spending tens of billions of dollars to produce dozens of electric models and build plants to assemble them and the battery packs they will need. G.M. just started production at a battery plant in Ohio and has two others under construction in Tennessee and Michigan. Ford is selling an electric version of its F-150 pickup, an electric Mustang sport utility vehicle and an electric delivery van, and is the second-largest seller of E.V.s in the United States, after Tesla.

Ford has also reorganized, splitting its automotive operations into one division that focuses on electric vehicles and rapid growth, and another that will develop gasoline models and aim to reduce costs and maximize profit as sales slow and eventually begin to fall. The company said this week that it was [eliminating 3,000 white-collar jobs](#) as a way of “redeploying resources and addressing our cost structure.”

Volkswagen started producing an electric S.U.V. at an existing plant in Chattanooga, Tenn., in July. The company is also trying to stake out supplies of raw materials. This week, Volkswagen and Mercedes-Benz announced agreements with the Canadian government to get access to lithium, nickel and other crucial metals and minerals used in batteries. Canada has abundant reserves of these materials, though most mines are still in the development stage.

Volkswagen was already investing in local supplies of raw materials in its various markets, but U.S. government policy has “turbocharged” the effort, Thomas Schmall-von Westerholt, the German carmaker’s chief technology officer, told reporters this week.

One reason automakers are embracing rather than resisting the transition is that consumers have shown an appetite for electric models. In the first half of the year, more than 370,000 fully electric vehicles were sold in the United States, [up 76 percent](#) from the year before, according to Cox Automotive.

Moreover, manufacturers believe that E.V. sales will continue to accelerate and exceed sales of gasoline-powered cars and trucks before long. Ford says it has more than 200,000 reservations for the electric F-150 Lightning pickup. G.M. said it had 150,000 for an electric Chevrolet Silverado, a truck that doesn’t go into production until next year.

One key to the adoption of electric vehicles is making them affordable. The models on the market tend to be considerably pricier than comparable gasoline models. Tesla’s Model Y compact lists for more than \$46,000 before any options are added. Ford’s Mustang Mach-E S.U.V. starts at just under \$44,000, about \$15,000 more than a similarly sized Escape.

Automakers are working on reducing costs as production ramps up. G.M.’s new battery plant in Ohio is assembling a modular battery pack that can be used for almost any electric car or truck. The company is counting on this design to create economies of scale that will enable it to price E.V.s in a range that many more consumers can manage.

“When you look at bringing everyone along in the transition to E.V.s, you’ve got to provide entry models into that space,” G.M.’s chief executive, Mary T. Barra, said in an interview this year.

The cost and availability of critical metals and other minerals used in batteries, such as lithium, cobalt and nickel, remain a concern, though. A steep rise in E.V. production could push up prices of raw materials and cause shortages.

Ford’s chief executive, Jim Farley, told analysts in a conference call last month that at best, only 50 percent of the raw materials needed to meet the auto industry’s announced E.V. targets were actually available.

G.M. and Ford recently struck deals with mining companies to purchase lithium and other battery materials. Ford has also decided to use two types of batteries, requiring different materials, and reached an agreement to buy battery packs from a Chinese company, CATL, the world's largest producer.

G.M. has said it has secured access to all the battery raw materials it needs to produce one million E.V.s in North America in 2025, and Ford says it has deals to provide 70 percent of the batteries it will need to make two million E.V.s a year by the end of 2026.

But how those companies and other automakers will obtain enough materials for an all-electric lineup remains unclear.

Another concern is the availability of charging stations. In most states, stations are few and far between, and vast parts of rural areas have none at all. Home charging stations can reduce the need for commercial chargers, but they can cost an E.V. owner \$1,000 or more.

Tesla has built its own network of charging stations, although it must continue to expand it as it sells more cars. G.M., Ford and other automakers are working with companies including EVgo and Electrify America to develop charging networks. California's network is the densest in the United States, but electric vehicle owners still complain about long waits to recharge.

Bloomberg, August 24, 2022

[California Finalizes Details on Banning Gas-Powered Car Sales](#)

By David Baker

dbaker116@bloomberg.net

California is poised to phase out sales of nearly all new, gas-burning cars by 2035 [under rules](#) regulators are expected to approve Thursday, a move that could dramatically accelerate the transition to electric vehicles nationwide if other states follow suit.

Governor Gavin Newsom first announced the 2035 goal in [an executive order](#) two years ago, but the new rules would set a firm timetable for reaching it, requiring automakers to steadily increase their sales of zero-emission cars in the nation's largest auto market. And because [17 other states](#) typically follow California's auto-emissions standards, Thursday's vote by the California Air Resources Board could reverberate far beyond the Golden State's borders, forcing the auto industry to speed up its switch to electric cars.

It could also burnish Newsom's climate-change credentials at a time when the Democratic governor is widely believed to be weighing a run for the White House.

California, birthplace of Tesla Inc., has long been the nation's top market for electric vehicles, and they account for [15% of new cars](#) registered in the state this year, according to the California New Car Dealers Association. The proposed regulations would set annual targets for boosting that percentage, starting at 35% in 2026 and hitting 68% in 2030. Plug-in hybrids, which switch between electricity and gas, and hydrogen fuel-cell cars would also count toward those goals. California already has its own clean-vehicle incentive program, offering [rebates](#) of as much as \$7,000 toward the purchase of zero-emission vehicles, although cars costing more than \$45,000 don't qualify.

The move would dovetail with President Joe Biden's efforts to push electric car sales. The Inflation Reduction Act he signed last week includes tax credits of up to \$7,500 to EV buyers, although income restrictions apply. And last year's infrastructure law included \$5 billion to build a [nationwide network of charging stations](#) along major highways, to convince drivers they won't get stranded without power on a trip if they make the switch.

While most automakers have announced plans to ramp up production of EVs, the industry has expressed concern about getting locked into specific timelines for their adoption and that many consumers may not be ready to ditch gasoline. Electrics made up less than 6% of new car sales in the first half of this year, according to the Edmunds automotive information service. And EV prices, already higher than gas-powered cars, are rising as the war in Ukraine, supply chain problems and rising demand make the metals inside their rechargeable batteries more expensive. The average sales price for an EV in July was nearly \$62,900, according to Edmunds, compared with \$47,200 for all vehicles.

“It’s a worthy goal, but may be unrealistic given the charging infrastructure and likely increasing demand for power,” Brian Moody, executive editor for Kelley Blue Book and Autotrader, said in an emailed statement.

Still, Edmunds analyst Jessica Caldwell said Wednesday that the industry should be able to meet California’s goals. “If automakers can pick up production, sufficient investments are made in charging infrastructure and the power grid, and financial incentives can be made more available, this milestone should be achievable—if not surpassable,” said Caldwell, the company’s executive director of insights.

E&E News (POLITICO), August 25, 2022

[Calif. poised to ban sales of new gas-fueled cars by 2035](#)

By Anne C. Mulkern

California regulators are poised to approve a groundbreaking rule that would effectively ban sales of new gas-fueled passenger vehicles starting in 2035.

The California Air Resources Board (CARB) is scheduled to vote today on its “Advanced Clean Cars II” [proposal](#), which would require that automakers offer only electric and other zero-emission vehicles (ZEVs) in the state by that 2035 deadline.

Automakers must hit other clean car benchmarks along the way, including ensuring that 35 percent of new cars are ZEVs by 2026, and 68 percent are ZEVs in 2030. Only used gas-fueled cars would be sold in the state after 2035.

“California now has a groundbreaking, world-leading plan to achieve 100 percent zero-emission vehicle sales by 2035,” said Democratic Gov. Gavin Newsom, who in a 2020 executive order asked CARB for the regulation. “It’s ambitious, it’s innovative, it’s the action we must take if we’re serious about leaving this planet better off for future generations.”

California Gov. Gavin Newsom (D) speaking to reporters Aug. 11 in Antioch, Calif. | Justin Sullivan/Getty Images

The proposed rule would also require automakers to give warranties ensuring 70 percent of EV battery health for eight years or 100,000 miles. There are also requirements to standardize battery health measurements and mandates for battery labeling, aimed at aiding battery recycling.

The likely decision potentially has reverberations beyond the nation’s most populous state. California officials hope that the [17 states](#) that follow California’s existing ZEV mandate will adopt the 2035 edict. That action is already underway in some states, including Massachusetts, where Gov. Charlie Baker (R) recently signed legislation to phase out sales of gas-fueled cars by 2035.

That Massachusetts law can’t take effect until California acts, said Bill Magavern, policy director at the Coalition for Clean Air. California is the only state that has an EPA waiver from the national vehicle emissions standard, as long as its regulation is tougher. Massachusetts and other states must follow

either the national standard — or California’s stricter one. California also will need to secure a new EPA waiver for the Advanced Clean Cars II mandate, because it’s a new program.

In addition to Massachusetts, New York and Washington also have said they will ban sales of new gas cars after 2035.

Magavern said California “will kind of be a demonstration that this transition is happening. We’ve already seen a lot of signs of that, but I think this will actually be the most tangible sign.”

Several environmental groups also praised the move, while calling for more investments in EV-charging stations and for more help for lower-income residents.

The cars and trucks that crowd California’s roadways contribute the largest share of the state’s greenhouse gas emissions, at 40 percent. The expected emissions cut from the proposed mandate is “critical to achieving” the state’s goal of carbon neutrality by 2045, according to the CARB proposal.

By 2040, CARB said, the proposed rule will cut GHG pollution in the state by 58.4 million metric tons per year. That’s equivalent to taking nearly 12.6 million gas-powered cars off the roads.

It will also cut other tailpipe pollutants and is expected by 2030 to result each year in about 4,000 fewer heart-related deaths and 800 fewer hospital admissions for respiratory illnesses, CARB said.

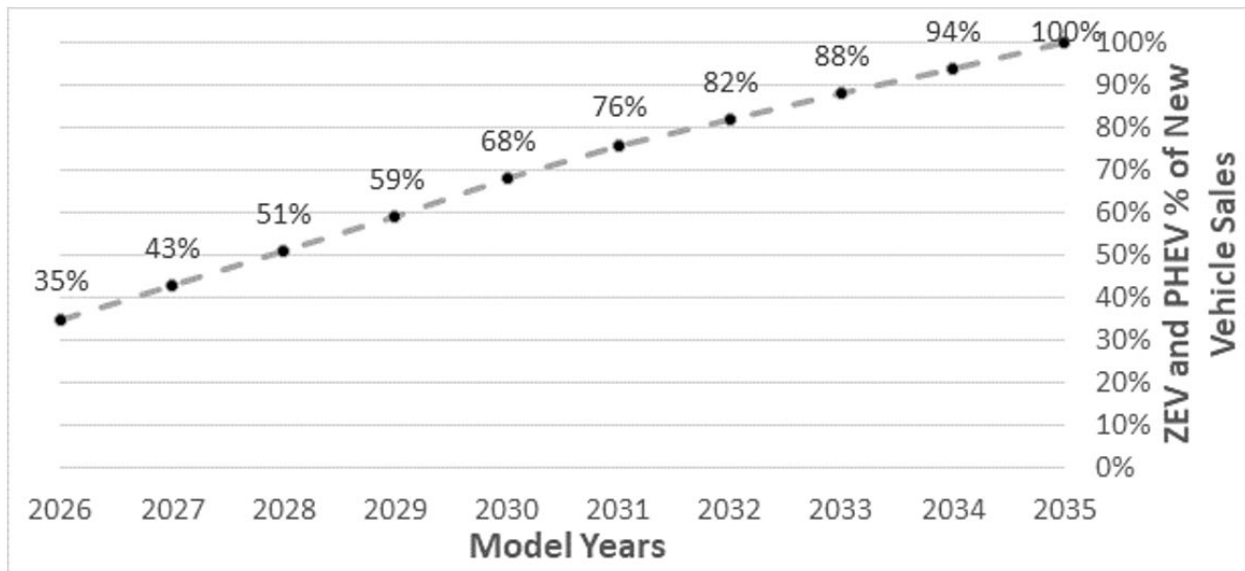
The likely California mandate isn’t without conflict, however.

Although most automakers plan to shift into making more electric cars, they also warn the clean car future takes more than California passing a regulation.

“Whether or not these requirements are realistic or achievable is directly linked to external factors like inflation, charging and fuel infrastructure, supply chains, labor, critical mineral availability and pricing, and the ongoing semiconductor shortage,” John Bozzella, president and CEO of the Alliance for Automotive Innovation, said in a statement. “These are complex, intertwined and global issues well beyond the control of either CARB or the auto industry.”

Bozzella added that his group has advised CARB “that getting more EVs on the road (a goal we unequivocally share and work every day to advance) must go hand-in-hand with other policies that together will ultimately determine the success of this transition.”

EV sales must double by 2026



A rule that California is expected to enact today requires carmakers that sell in state to produce an increasing number of zero-emissions vehicles. This chart shows the mandates by year. | California Air Resources Board

David Reichmuth, senior engineer with the Union of Concerned Scientists' Clean Transportation Program, noted in a [blog post](#) that several manufacturers already are offering or plan to offer new electric models.

Ford Motor Co. is selling an electric F-150 pickup truck. General Motors Co. plans to make all its new passenger vehicles zero emissions by 2035. Volkswagen said it expects half of its U.S. sales to be electric cars by 2030. Volvo has committed to manufacturing only fully electric vehicles by 2030, and there are multiple plans for zero-emissions, full-size SUVs and pickups, Reichmuth said.

California ZEV sales also just set a record. Plug-in electric vehicles made up 15 percent of new vehicle sales in the first half of 2022, according to the California New Car Dealers Association ([Climatewire](#), Aug. 10).

Sales of plug-in hybrids made up 2.9 percent of new car sales in the same period. Under the new mandate, such hybrids can make up one-fifth of new car sales in 2035, as long as they can solely run on electricity when on highways.

But sales of EVs and hybrid plug-ins will need to nearly double in about three years to meet the California mandate's first deadline, which requires 35 percent of new car sales to be zero-emissions by 2026.

Electric vehicles on average currently cost more than equivalent gas-fueled cars. That's expected to change with ZEV prices falling over the next few years, CARB officials said yesterday.

But some questioned whether the proposed mandate will work if car makers fail to provide enough ZEV options, both in model variety and in price.

"If you don't have enough alternative vehicles available," the market won't accept the mandate, said V. John White, executive director of the Center for Energy Efficiency and Renewable Technologies. "It's a target, it's intention, but you've got to have the vehicles and you've got to have the ability to sell them for that to work."

White said the Inflation Reduction Act, the major climate bill President Joe Biden signed into law last week, could help bring lower-priced ZEVs into the market. The measure contains an up to \$7,500 tax incentive for purchases of some electric vehicles. There are caps on incomes and vehicle costs, limiting which buyers and which cars qualify.

In addition, there are restrictions on where qualifying cars, their batteries and battery components must be manufactured. But as a result, electric vehicles could cost less than gas-fueled models, he said.

“If that’s the case, then this is probably doable,” White said. “But there’s still infrastructure issues, there’s planning to do. And I just am a little leery of waving magic wands and saying our intention is the same as accomplishing.”

Because California will need to secure a new EPA waiver for the new mandate, it puts it in a more precarious position than a law passed by the Legislature, he said. A future president could attempt to withdraw California’s EPA waiver, as the Trump administration did. That action stalled when Biden took office.

There also are concerns about how lower-income people will afford EVs. CARB said it will offer automakers incentives for providing lower-priced cars to lower-income people or providing cars to state programs that help those communities.

Magavern with the Coalition for Clean Air said he has urged CARB to impose a 75 percent ZEV mandate in 2030, instead of the 68 percent in the draft rule. Magavern said that would help get more cars on the road faster, and some of those could be resold at a lower price as used cars.

“The technology warrants it, and the need for the emission reductions is so urgent that we should be ramping up sooner rather than later,” Magavern said. “And also the more cars that you get sold on the new vehicle market, then the sooner they’ll be available on the secondary market, which is where most people buy their cars.”

Los Angeles Times, August 25, 2022

[California set to make history by banning sales of gas-powered cars](#)

By Tony Briscoe

tony.briscoe@latimes.com

California air regulators are set to vote Thursday on a historic plan that would effectively require all new cars sold within the state to be zero-emission vehicles by 2035 — a ruling that would put the nation’s most populous state in the forefront of phasing out internal combustion engines and the harmful, planet-warming gasses they emit.

If approved, the regulations are expected to significantly reduce vehicle carbon dioxide emissions, as well as smog-forming nitrogen oxides over the next two decades. It could also lead the way in transforming America’s aging fleet of gasoline-powered automobiles.

“The climate crisis is solvable if we focus on the big, bold steps necessary to stem the tide of carbon pollution,” Gov. Gavin Newsom said Wednesday. “California now has a groundbreaking, world-leading plan to achieve 100% zero-emission vehicle sales by 2035. It’s ambitious, it’s innovative, it’s the action we must take if we’re serious about leaving this planet better off for future generations.”

The proposed rules would establish a credit system for automakers supplying California car dealerships and take effect in 2026. In that year, [35% of all new cars](#) an auto manufacturer sells to California dealerships would need to be either zero-emission, plug-in hybrid or hydrogen-powered vehicles. That would increase to 68% in 2030 and 100% by 2035.

If carmakers failed to meet the mandated percentages, they would be required to obtain credits from another manufacturer that had exceeded that quota. The state could also penalize automakers that fail to meet the targets, fining them roughly \$20,000 for every vehicle short of their target in a given year.

In the two years since Newsom signed [an executive order](#) directing the California Air Resources Board to plan the phasing out of new gas-powered vehicle sales, the board has avoided calling the directive a “ban.”

“Some new gas-powered vehicles will still be allowed to be sold, but they must be plug-in hybrids,” the board states [on its website](#). Those so-called PHEVs, however, must be able to run at least 50 miles on batteries before switching to gas.

According to air quality officials, the new regulations would reduce greenhouse gas emissions from cars by more than 50% in 2040, compared with if no action were taken. Tailpipe emissions are the leading contributor of carbon dioxide in California and accounted for about 40% of the state’s greenhouse gas emissions in 2019.

Additionally, state officials say the plan would cut smog-forming nitrogen oxides by more than 25% in 2037. They estimate the rule will result in over 1,400 fewer deaths from heart disease, and help Californians avoid more than 700 emergency room visits for asthma between 2026 and 2040.

Although the rule could possibly signal the demise of gas-powered cars, some environmental organizations say the interim targets aren’t ambitious enough.

Regina Hsu, a senior associate attorney for Earthjustice, said several countries have more ambitious targets, including Norway, which plans to phase out new gas cars by 2025, and the Netherlands, which is aiming for all zero-emission vehicles by 2030. In the U.S., Washington Gov. Jay Inslee has set a goal to phase out new gas cars in the state by 2030 (though it is nonbinding commitment).

“The ramp that we see is not as stringent as it could be,” Hsu said. “We think that [the air resources board] has sort of missed an opportunity here to be more ambitious. And this rule will be leaving clean air and climate benefits on the table.

“Based on automaker projections, this rule is not that ambitious,” Hsu said. “We think it sort of tracks what automakers were planning to do and it doesn’t have that regulatory mechanisms that will push them to do more — especially in a state like California, where we have regions with the worst air quality in the country.”

Hsu also said more needs to be done to help working-class families purchase zero-emission vehicles, noting that the state’s median individual income is \$41,000.

California holds the distinction as the only state that can regulate cars, because of a provision in the Clean Air Act that allows it to seek a waiver from federal rules. Other states can follow California’s more stringent standards, including the zero-emission targets that will be voted on this week.

Today, California is home to about 43% of all electric vehicles nationwide. In 2021, about 12% of new vehicle sales were zero-emission or plug-in hybrid vehicles.

Brian Maas, president of the California New Car Dealers Assn., which represents more than 1,200 franchised new car and truck dealer members, said the organization is “all-in” on the transition to zero-emission vehicles.

However, the organization has a number of concerns about how this transition to 100% zero-emission vehicles will look.

In public comments to state officials, the group raised concerns about the stability of the supply chain, including the higher demand for raw materials (such as lithium used to make electric car batteries).

Dealers and consumers have seen the prices of new cars swell to historic highs, driven by rising inflation, a crippling semiconductor shortage and increased demand during the pandemic.

Affordability has been one of the largest obstacles to widespread adoption of electric vehicles. The average cost of new cars, Maas said, is over \$45,000. For electric vehicles, which some argue have an outside luxury catalog, the average cost is \$66,000.

“Assuming this rule gets adopted, we are going to have to do what we can to help the manufacturers figure out how to drive the price of making these cars down,” Maas said. “Because if they’re not affordable to consumers, it’s going to delay the transformation to electrification.”

State officials believe the price of electric vehicles could reach parity with gas-powered cars by 2030.

However, Maas worries if that doesn’t happen, it could push consumers to continue to purchase used vehicles with gasoline engines, or new gas-powered vehicles out of state.

He argued the California Air Resources Board should establish a formal review period to assess the market conditions midway to the 2035 target.

“I think what we’re asking Californians to do — and the other states that follow California — is to change personal transportation in a way that hasn’t been changed since we went from horses to internal combustion engines,” Maas said.

“We’re going to have to change how we fuel these vehicles, from gas stations to chargers. We’re going to have to figure out how we fix these vehicles. How long do the batteries last? How are batteries recycled? So there are lots of questions related to this — all subsumed under the rather worthy goal of saying, ‘You know what? We need to convert to electrification because it’s better for our society.’ We’re all in for that. We just want to make sure that as we proceed along this path, we’re all working together to answer all these questions,” he said.

San Francisco Chronicle, August 25, 2022

[California’s historic ban on gas-powered cars includes one major exception](#)

By Dustin Gardiner

Dustin.gardiner@sfchronicle.com

California regulators approved a plan Thursday to mostly ban the sale of new gas-powered cars starting in 2035, adopting the first statewide clean-car mandate of its kind in the country.

The move formalizes an executive order that Gov. Gavin Newsom signed nearly two years ago, requiring the state to phase out the sale of cars that generate planet-warming emissions. Electric-vehicle experts called the vote historic and said it will reshape the global auto market.

Dan Sperling, a member of the Air Resources Board, which approved the rule, and founding director at the Institute of Transportation Studies at UC Davis, called the vote the most “transformative” that state regulators have ever taken.

“There is no such thing as perfect,” he said. “This is really historical. We’re going to look back on this day and say how amazing it was what we pulled off.”

Newsom suggested that the policy reaffirms California’s status as a national trendsetter on climate issues, saying the state will “continue to lead the revolution towards our zero-emission transportation future.”

But the rule includes a major exception: Car companies can keep selling some plug-in hybrid vehicles, which use gasoline in addition to electricity. That's a departure from Newsom's earlier pledge to require 100% zero-emissions vehicle sales.

Many environmentalists and some vehicle makers cheered the rule's adoption. Others, however, called the exception for hybrid vehicles and other caveats an example of how the rules were watered down to provide more leniency for some automakers who've complained they aren't ready for the transition.

The rule requires car companies to make sure that, by model year 2035, all new vehicles they sell in the state are fully electric models that do not produce greenhouse gas emissions or — alternatively — are the "cleanest-possible plug-in hybrid-electric vehicles."

Older gasoline-powered cars would still be allowed on the road after 2035 and people could sell them on the used-car market.

Scott Hochberg, an attorney at the Center for Biological Diversity's Climate Law Institute, said that while the rule is an important first step, state regulators took a "really wide view" of what vehicles will qualify as zero-emissions models.

"The role of hybrids should be minimal going forward," he said. "We would've liked to see more progress sooner."

When Newsom announced the electric car mandate in September 2020, his administration said that hybrid vehicles would not be allowed. The governor's executive order declared that the state's goal would be purely "zero-emission" new vehicle sales by 2035.

Mary Nichols, the former chair of the Air Resources Board, told reporters during a news conference at the time that the state didn't plan to include hybrids under the rule.

"We see this 15-year period as one during which, by the end of it, people will recognize that, yes, they can find a full zero-emission vehicle that meets all of their needs," she said in 2020.

Newsom's office did not immediately respond to a question about the exception for hybrid vehicles. The Air Resources Board, in a meeting agenda packet, said hybrids would be allowed in "limited circumstances, to meet demand for certain kinds of uses."

Sasan Saadat, a senior researcher and policy analyst at Earthjustice, an advocacy group, said he's concerned, on one hand, that automakers will be allowed to count hybrids as zero-emission vehicles. But he said the issue could eventually be moot because automakers will likely stop making hybrids due to the high cost of manufacturing both batteries and combustion engines.

Saadat said a more concerning aspect of the rule is that the state will allow car companies to use credits — which they can purchase from EV companies like Tesla — to liberally pad their compliance rates. Effectively, he said, some automakers will be able to delay selling electric models for years.

"The progress we make this decade matters even more than when we achieve 100% (electric) sales," Saadat said. "There's a glut of these credits in the bank."

Under the rule, automakers must hit a series of interim sales targets — 35% of new vehicles must be fully electric or hybrid models by 2026. That mandate ramps up to 68% by 2030, and 94% by 2034. Credits can be used to offset a portion of those targets in earlier years.

Sales of electric cars are surging in California, however, and about 9.5% of new vehicles sold in the state last year were fully electric models, according to the New Car Dealers Association. That's up from about 6% when Newsom signed his executive order in September 2020.

The move will influence the transportation industry not just in California, by far the largest vehicle market in the nation, but in dozens of other states that follow its more stringent pollution standards.

Assembly Member Phil Ting, D-San Francisco, first [introduced legislation](#) to ban the sale of gas-powered cars in 2018. His bill was killed by moderate Democrats in the Legislature, but he said Newsom's administration showed that the state can drive the clean-car movement.

"Since then, our climate crisis has worsened with transportation remaining a top contributor to greenhouse gas emissions," Ting said in a statement. "A zero-emissions future is our only path forward."

At the same time, the Air Resources Board vote was criticized Thursday by some auto industry and business groups who said it would dramatically drive up the cost of vehicles for consumers.

Electric cars are typically thousands of dollars more expensive than comparable gas-powered models — the average electric vehicle cost over \$66,000 on average last month, according to Kelley Blue Book, though the Chevy Bolt starts as low as \$25,600.

Critics also say the state doesn't have nearly enough public charging stations, let alone a reliable enough electrical grid to support a rapid transition.

"It's a worthy goal, but may be unrealistic given the charging infrastructure and likely increasing demand for power," Brian Moody, executive editor at Kelley Blue Book, an auto research company, said in a statement.

Air regulators and Newsom have vowed to make it easier for working-class families to get into zero-emissions vehicles. California's [current budget](#) sets aside a record \$10 billion for electric vehicle subsidies and infrastructure over the next five years, spending that prioritizes low-income communities.

"We're not done today," Sperling, of the Air Resources Board, said before the vote. "It's going to be very hard getting to 100%."

Sacramento Bee, August 24, 2022

[California expected to ban sales of new gas-powered vehicles in just 13 years](#)

By Randy Diamond

rdiamond@sacbee.com

The demise of the gas-powered car is about to be put in high gear.

The California Air Resources Board is expected to approve sweeping new regulations on Thursday that would require 35% of new cars sold in the state to be electric vehicles by 2026 — and 100% by 2035.

The regulations, the first of its kind, would completely end the sale of new gasoline or diesel cars in California in just 13 years.

The ruling would not prevent motorists already owning gas- or diesel-powered vehicles from continuing to drive them.

But motorists who still would want to buy a new gas-powered or diesel vehicle, would have to go to Arizona or another state, as early as 2026, if dealers run out of their allotment of conventionally powered cars.

The expected action by the Air Resources Board comes nearly two years after a 2020 executive order by Gov. Gavin Newsom requiring 100% of new car sales to be zero-emission vehicles by 2035.

The Air Resources Plan, part of California's efforts to ramp up air quality, increases the number of new cars that must be electric to 51% of all new car sales in 2028 and 68% in 2030, until 100% is reached in 2035.

The new rules come, however, despite affordability questions on the price of electric cars — the average cost is \$66,000 —and a shortage of chargers to power the vehicles.

Last year, a state subsidy program to provide a minimum of \$4,500 in grants for electric car purchasers ran out of money around mid-year.

"It was very frustrating, " said Keith Hamilton, co-executive director of the Central California Asthma Collaborative, which runs an electric car equity program.

Hamilton said an approximate doubling of state funds to around \$1 billion this year should help motorists who had to abandon their electric car purchases last year.

A lack of chargers is another big problem, particularly for tenants in rental complexes.

Environmental advocates have urged that state building codes require every parking space in rental complexes have chargers connected to it.

But current state rules set only minimal requirements. Tenants in residential complexes with their own dedicated parking space can force their landlord to provide a charger but the tenant would have to pay the cost.

Chargers can run several thousand dollars.

Aides to Newsom at a news conference Wednesday morning insisted that updates to the state building code were in the works that would require more chargers in rental complexes. They were not specific.

A state report found that 1.2 million chargers will be needed for the 8 million zero-emission vehicles expected in California by 2030.

Around 70,000 public charges are currently in operation in California.

The sale of electric vehicles has been increasing in California, even without the new electric car sales mandates, driven, at least in part, by soaring gas prices.

The California New Car Dealers Association said in an August report that electric vehicle sales in 2022 reached the highest numbers reported in the last five years, 15.1% — a sharp increase from last year's 9.5% total.

CBS News, August 26, 2022

[Why California's bold electric-vehicle targets are so important for drivers — and the climate](#)

By Irina Ivanova

California's push to phase out sales of new gasoline-powered vehicles in just over a decade represents a major step in driving the nation toward an all-electric future and reducing air pollution.

The California Air Resources Board (CARB) on Thursday approved [bold targets for electric vehicle](#) sales, along with new standards EV's range of travel and incentives for carmakers to sell them more cheaply. The plan marks a tectonic shift for the nation's most populous state and its largest car-sales market, auto industry and environmental experts said.

"This is the most significant change since we went from horses to vehicles 125 years ago," said Brian Maass, president of the California New Car Dealers Association.

Here's why the new rules promise to shake up the auto industry, juice America's shift to electric cars and help in the fight against climate change.

New gas cars won't be sold by 2035, but aren't outlawed

The rules set ambitious targets for car manufacturers, speeding California's already rapid adoption of EVs. Starting with model year 2026, 35% of new cars sold in the state will need to be electric. That's more than double the current penetration of EVs, which made up 15% of new vehicles sold in California in the first half of this year, according to the California New Car Dealers [Association](#).

The state will require the percentage of EVs rises each year, reaching 100% by 2035. One-fifth of these cars are permitted to be plug-in hybrids, which run on batteries and gas. And the rules don't affect used vehicles, meaning that gas-engine cars will continue to be sold.

Tackling the biggest source of climate pollution

Cutting vehicle emissions directly tackles the biggest contributor to climate change in California — a state that is disproportionately feeling its effects through increased wildfires, heat waves and drought.

"In the U.S., transportation is the largest single source of global warming pollution, and in California the majority of those emissions come from passenger cars and trucks," David Reichmuth, senior engineer in the clean transportation program at the Union of Concerned Scientists, told CBS MoneyWatch. "So if we want to try to slow climate change, we absolutely have to address passenger cars and trucks,"

California regulators [estimate](#) that new targets will eliminate nearly 60 millions tons a year of greenhouse gasses and particulate matter, which causes asthma and other health problems. Less pollution means some 1,200 fewer people per year will die from heart or lung problems, CARB projects.

Ambitious timeline

The speed of the transition could create a challenge for carmakers, which during the pandemic have struggled to produce enough cars — of any type — to meet consumer demand.

"Right now we're dealing with a supply shortage in the automotive industry, and if it goes on it may actually be hard for automakers to hit their targets, and not through any fault of their own or even the consumer demand," said Jessica Caldwell, executive director of insights at Edmunds.

Infrastructure, too, presents a challenge. California now has about 80,000 charging stations, far short of the 250,000 it aims to have by 2025. Lagging construction of charging infrastructure and high materials costs were among the objections that automakers raised to the ambitious timeline for encouraging EV sales.

"Most car makers are committed to a zero-emissions future — it's a question of how fast they can achieve it," said Maas of the dealers' association. "The real question, and one that is unanswerable at this point, is whether consumers are prepared to buy these vehicles as fast as CARB wants to mandate them."

More affordable electric vehicles — down the road

The new rules are likely to make car-buying pricier for Californians in the short term, while over the longer term likely making zero-emissions vehicles cheaper. The typical EV today costs over \$60,000, about \$12,000 more than typical gasoline-fueled vehicle.

"Adding these standards in the near term is going to introduce cost. It's going to save [consumers] on gasoline and maintenance costs, but the upfront costs are going to be high," said Josh Linn, a professor

in agricultural and resource economics at the University of Maryland and senior fellow at the nonprofit Resources for the Future.

However, Linn and other experts noted that, as battery prices continue to fall and automakers roll out more EVs, they will gain savings of scale and be able to pass those savings to motorists.

"One thing we've seen over and over again is that companies, as they start to make new products, the cost of each of those new units falls dramatically," said Kathy Harris, clean vehicles and fuels advocate at the Natural Resources Defense Council. "The cost of solar panels fell 90% over 10 years. As more automakers make more EVs, we should see the cost come down."

The rules also nudge auto manufacturers to make electric cars more affordable, including incentives to produce vehicles sold for \$20,300 or less, opportunities to invest in car-sharing programs, and credits for discounted used cars sold to low-income people.

Impact likely to ripple far beyond California

California is a trend-setter in emissions standards. More than a dozen states, representing a third of the U.S. vehicle market, follow its air quality rules. Other states, including Colorado, Massachusetts, New York, Oregon and Washington, have set their own zero-emissions car [targets](#).

Carmakers, too, have invested heavily in EV production, putting more than \$80 billion toward building new clean vehicles in coming years. That investment, along with historic federal funding in the form of the [Inflation Reduction Act](#), is expected to boost EVs nationwide.

"Many companies are putting a lot of money behind what they are saying — production facilities, research and development," said Linn of the University of Maryland. "Car companies are setting certain goals They're making a real commitment to switching from gasoline to electric."

He added, "Each of these policies make it easier to go further."

Cars.com, August 25, 2022

[California Vows to Kill Gas-Powered Cars by 2035, But Is it Feasible?](#)

By Jane Ulitskaya

California may soon see an accelerated push for electric vehicle adoption. Following on the heels of the [EV tax credit overhaul](#), a new set of [rules proposed by the California Air Resources Board](#) aims to limit the state's new-car sales to all-electric or plug-in hybrid models by 2035. Regulators are expected to vote on the proposal Thursday; if passed, the new guidelines will likely extend beyond the borders of the Golden State to nearly a third of the country. Below is the roadmap for the changes, the implications for car shoppers, and the challenges and opportunities that must be addressed.

The Advanced Clean Cars II proposal applies a roadmap to California Governor Gavin Newsom's [2020 executive order](#) that all new vehicles sold in California must be zero-emissions by 2035. The new plan steadily increases the share of all-electric or PHEV vehicle sales, starting with a 2026 target of 35%. Following an upward trajectory over the ensuing decade, EVs would account for 82% of total vehicle sales in 2032 and hit the 100% goal by 2035. Additionally, the measure would amend the low-emissions regulation standards for gas-powered vehicles. CARB claims these measures are necessary because transportation is the largest contributor to pollutants and greenhouse gases in California.

California Already Ahead of the EV Curve

California currently leads the nation in EV adoption, but the new proposal demands even more aggressive growth. All-electric cars and PHEVs made up approximately 18% of new-vehicle registrations

through the first half of 2022, [according to the California New Car Dealers Association](#), with the Tesla Model Y being the top-selling vehicle among EVs and gas-powered cars. That figure will need to roughly double to meet the first target outlined in the proposal.

Sam Fiorani, vice president of global vehicle forecasting at AutoForecast Solutions, is optimistic about California's ability to meet the guidelines:

"California is already on track to quickly switch to zero-emissions vehicles," wrote Fiorani in an email to Cars.com. "The state has, in the past, pushed the industry harder than it could possibly go, but this time the industry and its products are ready. New models are being introduced seemingly every day, and there will be a wide range of products to suit every buyer's need in a short time."

What It Means for Your State

Nationwide estimates for the percent of EV sales vary, yet most projections are in the single digits. Should the Advanced Clean Cars II plan pass, it's likely that many states will follow suit. Currently, [18 states](#) have implemented California's low-emissions and zero-emissions vehicle standards.

A [J.D. Power study](#) shows some regions are more receptive to EVs than others. Unsurprisingly, the West region, which includes California, saw the highest number of respondents report that they're "very likely" to consider an EV. The next most receptive region was the South, followed by the Northeast and North Central regions.

The new measures would impact shoppers of new vehicles only; current owners of gas-powered vehicles will be able to continue driving their cars through the 2035 deadline, according to CARB's [FAQ page](#).

Infrastructure Challenges

EV charging infrastructure may become a barrier to the outlined plan. A recent [J.D. Power EV charging survey](#) showed that even as more public EV chargers are installed, owners are *less* satisfied with the experience, finding that many stations are out of service. EV owners in the West region are the least satisfied with public charging — likely due to increased competition. Speeding up the rate of EV adoption in California could make the situation worse.

Home charging is a key component of EV ownership. While costly, installing a [Level 2 charger](#) at a single-family home is highly recommended for the best experience. Meanwhile, apartment dwellers who don't have that opportunity may still be confined to public chargers, making widespread EV adoption more difficult in dense urban areas.

Fiorani believes EV charging infrastructure will improve in lockstep with increased adoption, but it will take time — just as it did for gas-powered vehicles.

"While you can't have EVs without chargers, there's no point in having chargers without EVs to use them," wrote Fiorani. "The growth of charging infrastructure will come as the business case makes itself clear. More and more businesses are opening chargers as they see the benefit of luring EV drivers into their stores, and rest stops everywhere are increasing the number of chargers they offer ... When the internal-combustion engine started to take root in the early 20th century, it was years before a proper refueling infrastructure started to develop. Around the introduction of the Model T in 1908, gas-powered cars finally outsold electric and steam vehicles, but the first gas station wasn't opened until 1913."

Cost Could Be a Roadblock

Even as more [affordable EVs](#) are introduced, a potential hurdle to mass adoption is the higher average cost of battery-powered cars. For example, a new all-electric Ford F-150 Lightning starts at \$48,769, while a gas-powered F-150 starts at \$33,315 (prices include destination). Shoppers looking for [long-range EVs](#) will find most to be luxury models that carry higher price tags.

Fiorani attributes the higher costs of current EVs to the inventory shortage and believes more affordable options will start to trickle in as the situation improves.

“Chevrolet has already announced plans for a \$30,000 EV next year, and Ford has a \$40,000 F-150 Lightning coming,” he notes. “The market shift is on its way, but in this time of supply chain issues and a shortage of semiconductors, available parts for all vehicles go into the most profitable first. When there are enough parts to go around, there will be a wider variety of vehicles, EV and otherwise, on dealer lots.”

Lower costs for the EV purchase and home charging can make the transition more realistic for prospective buyers. Currently, installing a Level 2 home charger can cost thousands of dollars, as [Cars.com editors can attest](#).

What Will It Take to Work?

In addition to infrastructure improvements, EV incentives like the updated federal tax credit may motivate some shoppers to purchase a battery-powered car, especially as the credit is reinstated for popular models like the Tesla Model Y and extended to used cars. According to CARB, California’s suite of incentives and rebates on the EV purchase and charging options will support consumers looking to go electric; local EV incentives available to car shoppers vary by state, however.

Another challenge is getting shoppers acquainted with EVs prior to the purchase. In a recent survey, J.D. Power found 30% of respondents attribute a lack of information about EVs to their decision to reject them. Understanding the ins and outs of [owning one](#) will be key before making the switch. Shoppers should research how much range they need, [operating costs](#), the difference in charging levels and what to expect from the driving experience.

[KCRA-TV3 \(NBC Sacramento\), August 25, 2022](#)

**Video **Discusses ZEV mandate.*

[Spectrum News 1 \(Los Angeles\), August 26, 2022](#)

**Video **Discusses ZEV mandate.*

[CNN, August 25, 2022](#)

**Video **Discusses ZEV mandate.*

[KBFX-TV58 \(FOX Bakersfield\), August 25, 2022](#)

**Video **Discusses ZEV mandate.*

[KFBK-FM93.1 \(Sacramento\), August 25, 2022](#)

**Radio **Discusses ZEV mandate.*

Washington Post, August 25, 2022

[Did California just kill the gas-powered car?](#)

By Shannon Osaka

shannon.osaka@washpost.com

Five years ago, having an electric vehicle was along the lines of bringing your own bags to the grocery store or eschewing plastic straws: Some people did it, but those who did were either passionate environmentalists (often driving the snub-nosed Nissan Leaf) or wealthy technophiles (often driving the Tesla Model S). EVs felt like a novelty or a purity test — they certainly didn't feel like an inevitability.

But over the past few years, everything changed. There was the [Super Bowl ad for EVs](#), featuring Will Ferrell smashing his fist through a globe and shouting, "We're going to crush those lugers!" (Ferrell was referring to Norway, the country that sells more [EVs per capita](#) than any other country in the world.) There was the [announcement](#) by six automakers and 30 countries that they would phase out gasoline-powered car sales by 2040, and the call by President Biden to make 50 percent of new car sales emissions-free a decade sooner. There was the release of the GMC Hummer EV — a monstrous, electricity-guzzling house on wheels that many environmentalists abhorred — the Ford F-150 Lightning EV and even the Mustang Mach-E EV. Automakers, in short, took their most treasured brands — even brands that appeal to a swath of America that is decidedly *not* crunchy and environmentalist — and rolled out all-electric models.

In short, the transition from gas-powered, internal combustion engine vehicles to electric vehicles no longer feels niche, or speculative. It feels inevitable.

And this week, another profound development: California, which already leads the nation with 18 percent of new cars sold electric, is expected to approve a regulation to [ban the sales](#) of new gas-only powered vehicles by 2035. In addition to EVs, only a limited number of plug-in hybrids will be allowed to be sold. This is a big deal: California's car market is only slightly smaller than those of France, Italy and Britain — and while many countries have promised to phase out sales of gas cars by such-and-such date, few have concrete regulations like California. Sixteen states have traditionally followed California's lead in setting its own independent fuel standards — they could soon follow.

Going from 18 percent to nearly 100 percent EV sales in 13 years may seem almost impossible. But Corey Cantor, an electric vehicles associate at the research firm BloombergNEF, points out that, in 2019, 7 percent of new cars sold in California were EVs. In a few years, that number has more than doubled.

"When things move that quickly, it's pretty surreal," Cantor said.

Of course, roadblocks remain. Producing hundreds of thousands of electric cars will require supplies of critical minerals and a pace of factory manufacturing that doesn't currently exist. (Case in point: Ford has a [three-year backlog](#) for the Ford F-150 Lightning, thanks to sky-high demand.) The Biden administration has invested \$5 billion into a network of car chargers across the country, but [a recent study of chargers](#) in the San Francisco Bay area found that over a quarter weren't functioning.

For the moment, sales of EVs are mostly focused in [higher-priced vehicles](#), rather than smaller, more affordable sedans, but automakers are trying to push the price point down. And in order for consumers to take advantage of the new \$7,500 EV tax credit in the recently signed Inflation Reduction Act, more minerals and batteries will have to be produced within the United States. The combination of high upfront prices, the oft-mentioned "range anxiety" and unfamiliarity with EVs may cause some Americans to resist going electric for years to come.

Still, most EVs are now [cheaper](#) over the lifetime of the vehicle than comparable gas-powered cars. This year's spiking gas prices [drove many Americans](#) — some of whom had never considered going electric before — to look into what it would be like to drive a car that pulls its energy from the grid.

“A couple of years ago, there was always a question about EVs — do people want them?” Cantor said. “Now that’s not even the question. It’s all about scale-up.”

Associated Press, August 26, 2022

[California phasing out gas vehicles in climate change fight](#)

By Kathleen Ronayne

kronayne@ap.org

California set itself on a path Thursday to end the era of gas-powered cars, with air regulators adopting the world’s most stringent rules for transitioning to zero-emission vehicles.

[The move by the California Air Resources Board](#) to have all new cars, pickup trucks and SUVs be electric or hydrogen by 2035 is likely to reshape the U.S. auto market, which gets 10% of its sales from the nation’s most populous state.

But such a radical transformation in what people drive will also require at least 15 times more vehicle chargers statewide, a more robust energy grid and vehicles that people of all income levels can afford.

“It’s going to be very hard getting to 100%,” said Daniel Sperling, a board member and founding director of the Institute of Transportation Studies at the University of California, Davis. “You can’t just wave your wand, you can’t just adopt a regulation — people actually have to buy them and use them.”

[Democratic Gov. Gavin Newsom told state regulators](#) two years ago to adopt a ban on gas-powered cars by 2035, one piece of California’s aggressive suite of policies designed to reduce pollution and fight climate change. If the policy works as designed, California would cut emissions from vehicles in half by 2040.

Other states are expected to follow, further accelerating the production of zero-emissions vehicles.

Washington state and Massachusetts already have said they will follow California’s lead and many more are likely to — New York and Pennsylvania are among 17 states that have adopted some or all of California’s tailpipe emission standards that are stricter than federal rules. The [European Parliament in June](#) backed a plan to effectively prohibit the sale of gas and diesel cars in the 27-nation European Union by 2035, and Canada has mandated the sale of zero-emission cars by the same year.

California’s policy doesn’t ban cars that run on gas — after 2035 people can keep their existing cars or buy used ones, and 20% of sales can be plug-in hybrids that run on batteries and gas. Though hydrogen is a fuel option under the new regulations, cars that run on fuel cells have made up less than 1% of car sales in recent years.

The switch from gas will drastically reduce emissions and air pollutants. Transportation is the single largest source of emissions in the state, accounting for about 40% of the state’s greenhouse gas emissions. The air board is working on different regulations for motorcycles and larger trucks.

California envisions powering most of the economy with electricity, not fossil fuels by 2045. A plan released by the air board earlier this year predicts electricity demand will shoot up by 68%. Today, the state has about 80,000 public chargers. The California Energy Commission predicted that needs to jump to 1.2 million by 2030.

The commission says car charging will account for about 4% of energy by 2030 when use is highest, typically during hot summer evenings. That’s when California sometimes struggles to provide enough energy because the amount of solar power diminishes as the sun goes down. In August 2020, hundreds of thousands of [people briefly lost power](#) due to high demand that outstripped supply.

That hasn't happened since and to ensure it doesn't going forward Newsom, a Democrat, is pushing to [keep open the state's last-remaining nuclear plant](#) beyond its planned closure in 2025 and the state may turn to [diesel generators or natural gas plants](#) as a backup when the electrical grid is strained.

More than 1 million people drive electric cars in California today and their charging habits vary, but most people end up charging their cars in the evening or overnight, said Ram Rajagopal, an associate professor of civil and environmental engineering at Stanford University who has studied car charging habits and energy grid needs.

If people's charging habits stay the same, once 30% to 40% of cars are electric, the state would need to add more energy capacity overnight to meet demand, he said. The regulations adopted Thursday require 35% of vehicle sales to be electric by 2026, up from 16% now

But if more people charged their cars during the day, that problem would be avoided, he said. Changing to daytime charging is "the biggest bang for the buck you're going to get," he said.

Both the state and federal government are spending billions to build more chargers along public roadways, at apartment complexes and elsewhere to give people more charging options.

The oil industry believes California is going too far. It's the seventh-largest oil-producing state and shouldn't wrap its entire transportation strategy around a vehicle market powered by electricity, said Tanya DeRivi, vice president for climate policy with the Western States Petroleum Association, an industry group.

"Californians should be able to choose a vehicle technology, including electric vehicles, that best fits their needs based on availability, affordability, and personal necessity," she said.

Many car companies, like Kia, Ford and General Motors, are already on the path to making more electric cars available for sale, but some have warned that factors outside of their control like supply chain and materials issues make Californians' goals challenging.

"Automakers could have significant difficulties meeting this target given elements outside of the control of the industry," Kia Corp.'s Laurie Holmes told the air board before its vote.

As the requirements ramp up over time, automakers could be fined up to \$20,000 per vehicle sold that falls short of the goal, though they'll have time to comply if they miss the target in a given year.

The new rules approved by the air board say that the vehicles need to be able to travel 150 miles (241 kilometers) on one charge. Federal and state rebates are also available to people who buy electric cars, and the new rules have incentives for car companies to sell electric cars at a discount to low-income buyers.

But some representatives of business groups and rural areas said they fear electric cars will be too expensive or inconvenient.

"These regulations are a big step backwards for working families and small businesses," said Gema Gonzalez Macias of the California Hispanic Chambers of Commerce.

Air board members said they are committed to keeping a close eye on equity provisions in the rules to make sure all California residents have access.

"We will not set Californians up to fail, we will not set up the other states who want to follow this regulation to fail," said Tania Pacheco-Warner, a member of the board and co-director of the Central Valley Health Policy Institute at California State University, Fresno.

Associated Press, August 25, 2022

[California is poised to phase out sales of new gas-powered cars](#)

By Associated Press Staff

California is poised to set a 2035 deadline for all new cars, trucks and SUVs sold in the state to be powered by electricity or hydrogen, an ambitious step that will reshape the U.S. car market by speeding the transition to more climate-friendly vehicles.

The California Air Resources Board will vote Thursday on the policy, which sets the most aggressive roadmap in the nation for moving away from gas-powered cars. It doesn't eliminate such vehicles, however.

People can continue driving gas-fueled vehicles and purchasing used ones after 2035. The plan also allows for one-fifth of sales after 2035 to be plug-in hybrids that can run on batteries and gas.

But it sets a course for ultimately ending the era of filling up at the local gas station. The switch from gas to electric cars will drastically reduce emissions and air pollutants. The transition may be painful in parts of the state that are still dominated by oil; California remains the seventh-largest oil producing state, though its output is falling as the state pushes forward with its climate goals.

"The climate crisis is solvable if we focus on the big, bold steps necessary to stem the tide of carbon pollution," Democratic Gov. Gavin Newsom said Wednesday. He announced the 2035 goal two years ago and regulators have spent the time since then working out the details of what Newsom termed "the action we must take if we're serious about leaving this planet better off for future generations."

There are practical hurdles to overcome to reach the goal, notably enough reliable power and charging stations. California now has about 80,000 stations in public places, far short of the 250,000 it wants by 2025. The Alliance for Automotive Innovation, which represents many major car makers, flagged the lack of infrastructure, access to materials needed to make batteries, and supply chain issues among the challenges to meeting the state's timeline.

"These are complex, intertwined and global issues well beyond the control of either (the California Air Resources Board) or the auto industry," John Bozella, the group's president, said in a statement.

Though the state makes up 10% of the U.S. car market, it's home to 43% of the nation's 2.6 million registered plug-in vehicles, according to the air board.

California climate officials say the state's new policy will be the world's most ambitious because it sets clear benchmarks for ramping up electric vehicle sales over the next dozen years. By 2026, for example, one-third of new cars sold must be electric. About 16% of cars sold in California in the first three months of this year were electric.

The European Parliament in June backed a plan to [effectively prohibit the sale of gas](#) and diesel cars in the 27-nation bloc by 2035, and Canada has mandated the sale of zero-emission cars by the same year. The Chinese province of Hainan said this week [it would do the same by 2030](#).

In the U.S., Massachusetts, Washington and New York are among states that have set goals to transform their car markets or have already committed to following California's new rules.

California has historically been granted permission by the U.S. Environmental Protection agency to set its own tailpipe emissions rules for cars, and 17 other states follow some or all of its policies.

The new electric vehicle rules will also require federal approval, which is considered likely with President Joe Biden in the White House. A future Republican president, though, could challenge California's authority to set its own car standards, [as the Trump administration did](#).

Indeed, the new commitment comes as California works to maintain reliable electricity while it moves away from gas-fired power plants in favor of solar, wind and other cleaner sources of energy. Earlier this year, top energy officials warned the state could run out of power during the hottest days of summer, which happened briefly in August 2020.

That hasn't happened yet this year. But Newsom is pushing to [keep open the state's last-remaining nuclear plant](#) beyond its planned closer in 2025, and the state may turn to [diesel generators or natural gas plants](#) as a backup when the grid is strained.

Adding more car chargers will put a higher demand on the energy grid.

Ensuring access to charging stations is also key to ramping up electric vehicle sales. The infrastructure bill passed by Congress last year provides [\\$5 billion for states to build charges](#) every 50 miles (80 kilometers) along interstate highways. Newsom, meanwhile, has pledged to spend billions to boost zero-emission vehicle sales, including by adding chargers in low-income neighborhoods.

Driving an electric vehicle long distances today, even in California, requires careful planning about where to stop and charge, said Mary Nichols, former chair of the California Air Resources Board. The money from the state and federal government will go along way to boosting that infrastructure and making electric cars a more convenient option, she said.

"This is going to be a transformative process and the mandate for vehicle sales is only one piece of it," she said.

Though hydrogen is a fuel option under the new regulations, cars that run on fuel-cells have made up less than 1% of car sales in recent years.

Both the state and government have rebates for thousands of dollars to offset the cost of buying electric cars, and the rules have incentives for car makers to make used electric vehicles available to low- and middle-income people. Over the past 12 years, California has provided more than \$1 billion in rebates for the sale of 478,000 electric, plug-in or hybrid vehicles, according to the air board.

CalMatters, August 25, 2022

[California phases out new gas cars — so what's next for electric cars?](#)

By Nadia Lopez

New gasoline-powered cars will be banned in California beginning with 2035 models under a new groundbreaking regulation unanimously approved today to force car owners to switch to zero-emission vehicles.

In its biggest move yet to reduce reliance on fossil fuels and fight climate change, the [new rule](#) approved by the state Air Resources Board culminates a decades-long effort to transform the auto and power industries and change the cars people drive — the state's leading source of air pollution.

The regulation is the first in the world to end the sale of traditional gas-powered vehicles and ramp up sales of cars powered by electricity. A small number of other states and nations have set only voluntary targets.

The proposal was first [unveiled in April](#). In response to several board members' concerns, the staff made minor revisions today to address issues related to electric car battery durability and added provisions to enhance assistance for low-income residents.

"This regulation is one of the most important efforts we have ever carried out to clean the air," said Air Resources Board Chair Liane Randolph. "Our previous regulations to make cars cleaner made

improvements, but those improvements were incremental. This regulation will essentially end vehicle emissions altogether.”

Automakers will have to gradually electrify their fleet of new vehicles, beginning with 35% of 2026 models sold, increasing to 68% in 2030 and 100% for 2035 models. As of this year, about [16% of all new car sales](#) in California are zero-emission vehicles, twice the share in 2020.

The millions of existing gas-powered cars already on the roads and used car sales are unaffected by the mandate, which only sets a zero-emission standard for new models.

The switch to zero-emission vehicles marks a historic precedent that would ripple across the country, paving the way for other states, and perhaps countries, to follow.

John Bozzella, president and CEO of the Alliance for Automotive Innovation, a trade group representing automakers, said automakers support the transition to electric cars, but called the timeline “very aggressive,” adding that it will be “extremely challenging” for the industry to adjust in time.

“Whether or not these requirements are realistic or achievable is directly linked to external factors like inflation, charging and fuel infrastructure, supply chains, labor, critical mineral availability and pricing and the ongoing semiconductor shortage,” he said. “These are complex, intertwined and global issues well beyond the control of either the California Air Resources Board or the auto industry.”

Environmental justice advocates, who had been calling for a sales goal of at least 75% zero-emission cars by 2030, expressed disappointment at today’s hearing. While the rule is a “step in the right direction,” the board missed an opportunity to include more robust provisions in the policy to make sure low-income people can afford them, according to Roman Partida-Lopez, legal counsel at the Greenlining Institute.

“California had an opportunity to set a stronger standard,” he said. “The board came up short by not making this a more stringent rule or one that has environmental justice provisions that are mandatory rather than voluntary.”

Gov. Gavin Newsom today called it “a groundbreaking, world-leading plan” that “will lead the revolution towards our zero-emission transportation future.” He touted \$10 billion in state investments that will make it “easier and cheaper for all Californians to purchase electric cars.”

Concerns about affordability, durability

For many families, electric cars are an attractive option, but barriers keep them out of reach. New electric cars range in price from [\\$25,000 to \\$180,000](#). Price markups at dealerships due to car shortages and high demand have also [inflated the cost](#) of some electric cars by more than \$10,000, sometimes as high as \$15,000.

Air board officials project that the cost of an electric car will be equal to a gas car’s price as early as 2030 as supplies surge to meet the mandate.

Despite the higher upfront cost, the air board’s analysis projects that drivers will end up saving much more in maintenance and operation expenses. Charging at home costs about half as much as gas for the same number of miles driven. Drivers in California already pay some of the highest gas prices in the country.

At today’s hearing, air board members, environmental justice advocates and members of the public echoed [concerns they raised during a June hearing](#) about the proposal — challenges with high vehicle costs, lack of charging infrastructure and consumer reluctance.

The state's subsidy programs, designed to help low and middle-income residents who purchase electric cars, have repeatedly suffered from [inconsistent and inadequate funding](#). Meanwhile, auto groups said the industry is already dealing with global supply chain disruptions, battery shortages, and other constraints.

Air board staff member Anna Wong, who is part of the agency's sustainable transportation and communities division, acknowledged that the plan has a "stringent but achievable path." Many of the changes they proposed in the revised policy include provisions to help manufacturers cut costs for consumers, she said.

Under the mandate, electric cars must have a range of at least 150 miles on a single charge. Batteries will need to be more durable and carry a manufacturer's warranty. At least 80% of the original range must be maintained over 10 years, starting in 2030, a year earlier than initially proposed.

To ease the strain on automakers, the staff reduced the range requirement to 75% for the first eight years that a new car is on the road, extending it by an additional three years.

Automakers will be allowed to use a credit system that allows them to meet a lower percentage of sales if they offer cheaper cars at dealerships and participate in state subsidy programs.

To ensure enforcement, state officials could penalize manufacturers that don't meet their yearly percentages with hefty fines of \$20,000 for every car they fail to produce in a given year, according to air board staff. Automakers that fail to meet those requirements would need to get credits from another manufacturer that already met their targets. Air board staff also assured the public that they could amend the regulation at any point to address lingering equity and compliance issues.

Can the power grid cope?

Critics say the state needs more charging stations as electric car sales surge. California has about 80,000 stations in public places, falling short of the nearly 1.2 million public chargers needed by 2030 to meet the demand of the 7.5 million passenger electric cars anticipated to be on California roads.

Another question remains: Will there be enough electricity? Experts say California needs a more reliable power grid, sourced from climate-friendly renewables like solar and wind.

California's electricity consumption is expected to [surge by as much as 68% by 2045](#). But the power grid — marred by outages and increasingly extreme weather — needs massive investments to attain the clean-energy future outlined in California's five-year climate roadmap, called a [scoping plan](#).

Newsom in recent months has been pushing the idea of keeping the Diablo Canyon nuclear plant open, introducing [draft legislation](#) earlier this month that would continue operations past its scheduled 2025 closure date. It's part of a wider effort to maintain the reliability of the state's increasingly strained power grid and reduce its reliance on fossil fuels as California makes progress on transitioning to renewables.

But the contentious proposal, which would give owner Pacific Gas & Electric \$1.4 billion, has widespread opposition. A [new draft bill](#) is being circulated within the Legislature and instead proposes using that money for renewable infrastructure.

California already has the largest zero-emission car market in the country, with [more than 1.13 million plug-in vehicles registered](#) across the state. Nationally there are about 2.64 million. That means California accounts for 43% of the nation's plug-in cars.

The board's move today "is the most important action it has taken in 30 years," said board member Daniel Sperling, who also is director of the Institute of Transportation Studies at UC Davis.

California often sets tougher climate change policies that the federal government then follows. There are also [at least 16 states](#) that currently follow the state's strict auto emission standards that are expected to adopt these regulations. These states, along with California, represent about 40% of the country's new car sales, according to the board.

Healthier air

Air board staff project that the new rule will reduce passenger vehicle emissions by more than 50% by 2040. That results in 395 million fewer metric tons of greenhouse gases — the equivalent of emissions from burning 915 million barrels of gasoline.

The rule is considered essential to reducing smog and soot pollution, which violates health standards in much of the state, and to meeting California's goal of carbon neutrality by 2045.

Battling California's severe air pollution for longer than half a century, the air board has long believed in the promise of an electric vehicle future, initially implementing a zero-emission mandate in 1990, requiring that 2% of new car sales between 1998 and 2000 be emissions-free, increasing to 5% in 2001 and 2002. The board reversed its decision six years later after automakers expressed concerns that the technology and battery lifespan were not advanced enough to comply.

"The mandate has led a very tortured life and it was basically weakened for almost 20 years and then in 2012, we started strengthening it again," board member Sperling said. "So this represents an embrace of the original vision. It's important for California, it's important for the U.S. and it's important for the world."

State officials said Newsom's \$10 billion investment in vehicle incentives, charging infrastructure and public outreach over the next six years will be a critical tool to ramping up sales and improving access and affordability.

The proposal comes just a couple of weeks after Congress passed a sweeping climate bill, which pours billions into clean energy projects and renewables. The new law includes electric vehicle tax incentives that offer up to \$7,500 in rebates for Americans who want to purchase a new zero-emission car or \$4,000 for a used one. That rebate, in addition to the state's multiple subsidy programs, are expected to help provide some financial relief for car buyers.

Politico, August 25, 2022

[Blue states poised to copy California's gas-car phaseout](#)

By Camille von Kaenel and Alex Guillén

aguillen@politico.com

California moved Thursday to ban the sale of new gas-powered cars and trucks by 2035, a first-in-the-nation mandate the state's leaders hope will jolt the automotive industry and truly make electric vehicles mainstream.

Other states led by Democrats, including New York and Oregon, are expected to swiftly follow California's lead in a liberal-state push to fight climate change — moves not unlike past mandates on emissions and car safety.

California's determination to force what would amount to a monumental economic and social change reflects both the state's long history in shaping the country's auto market with stringent vehicle standards and the dire threat posed by climate change.

"It's ambitious, it's innovative, it's the action we must take if we're serious about leaving this planet better off for future generations," Gov. Gavin Newsom said in a statement after the California Air

Resources Board adopted the requirement. “California will continue to lead the revolution towards our zero-emission transportation future.”

The rule, which was formalized nearly [two years after Newsom first announced it](#), will pose a significant challenge. Sales of fully electric vehicles in California, the country’s largest auto market, have made up 16 percent of the total so far in 2022. Industry experts say reaching the new goal will require fixing supply chain issues and building charging stations — and for EV prices to come down.

“Whether or not these requirements are realistic or achievable is directly linked to external factors like inflation, charging and fuel infrastructure, supply chains, labor, critical mineral availability and pricing, and the ongoing semiconductor shortage,” said John Bozzella, the president and CEO of the Alliance for Automotive Innovation.

Nationwide, fully electric vehicles make up only 6 percent of total new car sales. Still, other states are expected to adopt similar targets.

New Jersey, New York and Massachusetts are among the 17 states that have already made it a practice of adopting California’s tailpipe emission standards, adding up to a third of the country’s auto market. Most of those states are now expected to copy the new electric vehicle requirements over the next months, with some using the rules to add teeth to existing emissions targets. Among the first could be Oregon and Vermont, where regulators have already started drafting rules similar to those endorsed by Newsom.

Automakers have long conditioned support for stronger electric vehicle mandates on state governments investing more in charging stations and other necessary infrastructure, as California has done.

Some European countries have already set sales quotas for gas-powered vehicles and are further along in converting. Growth in the U.S. has been hampered by factors that include a lack of charging stations, the price of EVs and more recently by supply chain problems that have caused shortages of lithium for batteries and microchips.

Automakers just five years ago would have had big problems with California’s ban, said Margo Oge, a former top career official in the Environmental Protection Agency’s transportation office. But a combination of continued pressure from European and Chinese authorities and industry investments have prompted a change.

“In the past, I think you would have had a lot of pushback from the car companies. I don’t expect that to be the case because many of the car companies — like GM, Ford, Volvo, Daimler, Volkswagen — they’re already there,” said Oge said, a member of Volkswagen’s International Sustainability Council.

Toyota sent a letter to California this week acknowledging the state’s ability to set the car rules, something California officials characterized as “old foes coming on board.”

Other states that have not traditionally followed California may also adopt more EV goals, Oge said, in part because of money available from the recently passed Inflation Reduction Act.

“[The] IRA is going to provide a lot of incentives to the states, for infrastructure, for manufacturing, for tax incentives,” she said. “So my hope is that other states will follow California.”

As more states adopt California’s rules, and the EV market expands, the federal government will come under increasing pressure to set similar national targets, said Elaine O’Grady, who works on auto policy for an alliance called the Northeast States for Coordinated Air Use Management.

“The more states that adopt California standards, the more likely it is that federal government standards will be closer to California,” O’Grady said.

California's rule has some exceptions. Older gas-powered cars could still operate and be sold on the used-vehicle market. In addition, some hybrids that are powered by gas and electricity will also be allowed.

The state will require permission under the federal Clean Air Act to set the requirement of 100 percent non-gas vehicle sales, and it's unclear how long that process will take. The Biden administration for months has been considering a separate waiver for strengthened tailpipe rules for heavy-duty trucks, with manufacturers complaining that the rule did not give them the required four-year lead time.

Such a waiver could also be vulnerable under a future Republican president opposed to the ban.

The Trump administration revoked an earlier waiver allowing California to set stronger emissions standards through 2025; litigation had only just begun when the newly arrived Biden administration hit reverse and restored the state's authority.

Los Angeles Times, August 25, 2022

[California bans sales of new gas-powered cars by 2035. Now the real work begins](#)

By Russ Mitchell

russ.mitchell@latimes.com

Buy a car in 2035 and you won't have to decide between gasoline, diesel or electric. You won't have a choice.

Citing an urgent need to address climate change while cutting back on air pollution, the California Air Resources Board voted Thursday to require all new cars and light trucks sold by 2035 to be what it calls zero-emission vehicles.

Lauren Sanchez, Gov. Gavin Newsom's climate advisor, called it "a huge day not only for California but the entire world."

The mission, she said: "Move the state away from oil."

The move marks a historic turn in the decades-long battle to curb motor vehicle pollution, a momentous shift for consumers, industry, the economy and the environment.

California has led the nation in auto emissions regulation since the air resources board was created in 1967 to combat the toxic yellow-brown smog that hung over Los Angeles. The state's large population meant automakers could not ignore California's mandates. Congress gave California permission to set its own rules decades ago, and California's emissions and fuel efficiency rules have been adopted by more than a dozen other states.

Even with that prodigious record, the zero-emission mandate "is the most important and transformative action that [the air resources board] has ever taken," said Dan Sperling, founding director of the Institute of Transportation Studies at UC Davis.

The mandate forces automakers to phase out gasoline and diesel cars, sport utility vehicles, minivans and pickup trucks in favor of cleaner versions powered by batteries or fuel cells.

If automakers fall short, they could be charged \$20,000 per noncomplying vehicle, the air resources board said. If consumers don't go along? That could cause big problems. But state officials think they will, and the trend line lends confidence.

Electric cars are rapidly gaining popularity in California. In 2012, less than 2% of new vehicles sold were electric. That grew to 7% in 2018.

But demand has surged since, and now 16% of new cars sold in the state are plug-in vehicles — battery-electric vehicles, led by Tesla, plug-in hybrids, plus a smattering of vehicles that run on hydrogen fuel cells. There are now 1.13 million zero-emission vehicles registered in California, according to the air resources board — 43% of the nation's total.

Once considered little more than glorified golf carts with paltry range, electric cars now can travel several hundred miles on a single charge, in models that range from small commuter cars to luxury vehicles to SUVs, pickup trucks and muscle cars.

Under the new rules, 35% of new cars must be zero emission by 2026, 68% by 2030, and 100% by 2035.

People could still buy internal combustion cars from another state. But many states, including most of its neighbors, tend to follow California's lead on vehicle emissions policy and are considering mandates of their own.

The effects of the 2035 mandate will be far-reaching, the air resources board said. It "will essentially end vehicle emissions altogether," board Chair Liane Randolph told reporters.

Not quite. As Randolph herself noted, owners of internal combustion cars can continue to drive them after 2035. It will still be legal to buy and sell used fossil-fuel cars and light trucks.

The mandate doesn't cover all of highway transportation, either. Heavy trucks that burn diesel fuel will have 10 extra years before they're banned. A proposed zero-emission mandate for heavy trucks wouldn't hit 100% until 2045.

And even the zero-emission vehicle mandate includes vehicles that are not zero-emission. Up to 20% of a carmaker's sales can be plug-in hybrids, which have both electric motors and gas engines, and still count as zero-emission vehicles, as long as the battery range is 50 miles or more.

The state uses "zero-emission" as shorthand, pertaining to the cars themselves as they move along the roadways. Recharging the batteries may well emit significant greenhouse gases, depending on what's generating the energy: coal, oil and natural gas on the dirtier side; solar, wind, hydropower and nuclear on the cleaner. Creating hydrogen from water for fuel cells requires significant electricity, so greenhouse gas emissions again depend on the source.

Today, 40% of the energy generated for use by Californians is zero-carbon, including 8.5% from nuclear power. But the percentage varies by locality. For example, while coal accounts for only 2.7% of the state's total power mix, 46% of Anaheim's electricity is produced by burning coal.

Still, the air resources board's vote marks a watershed in climate change policy.

Newsom ordered action two years ago and instructed the board to create a detailed plan. After several public hearings and testimony from hundreds of people and companies, the Thursday vote makes it official state policy. The U.S. Environmental Protection Agency must grant the state a waiver to set its own automobile emissions policies under the federal Clean Air Act, a likely slam-dunk under the Biden administration.

According to air quality officials, the new regulations would reduce greenhouse gas emissions from cars by more than 50% by 2040, compared with if no action were taken. Tailpipe emissions are the leading source of carbon dioxide in California and accounted for about 40% of the state's greenhouse gas emissions in 2019.

Additionally, state officials say the plan would cut smog-forming nitrogen oxides by more than 25% in 2037. They estimate the rule will result in over 1,400 fewer deaths from heart disease, and help Californians avoid more than 700 emergency room visits for asthma between 2026 and 2040.

Automakers have taken different positions on the mandate, ranging from enthusiastic to lukewarm to outright opposition.

Ford, which recently introduced its F-150 Lightning all-electric pickup truck, has worked closely with the air resources board.

In a statement, the automaker said that “combatting climate change is a strategic priority” and that the company is “proud of our partnership with California for stronger vehicle emissions standards, forged during a time when climate action was under attack.”

Toyota, which had placed big bets on its hybrid vehicles and lagged on pure-electric development, relented on its opposition and earlier this week sent the air resources board a letter recognizing its authority to set vehicle emission standards. The company had sided with the Trump administration on vehicle emissions issues.

Some environmental groups said the mandate doesn’t go far enough. Regina Hsu, a senior associate attorney for Earthjustice, noted that countries including Norway and the Netherlands have more ambitious timelines, and even Washington state has a plan to phase out new gas vehicles by 2030, although Gov. Jay Inslee’s commitment is nonbinding.

“The ramp that we see is not as stringent as it could be,” Hsu said. “Based on automaker projections, this rule is not that ambitious.”

But the transition to electric vehicles won’t be easy, and huge uncertainties remain.

Cost is one. An electric vehicle still costs far more than an equivalent gasoline vehicle. According to Kelley Blue Book, the average EV sold for \$66,000 in July, compared with \$48,000 for the average internal combustion vehicle.

In a presentation to reporters, air resources board officials pointed to studies that show savings in fuel and maintenance can make an EV a better financial deal over time, and that prices would continue to drop.

That’s not certain, however. Supply chain snags and shortages of crucial battery materials such as lithium and cobalt have cut back EV availability while boosting purchase price.

As EV costs remain high, green-oriented politicians feel pressure to offer incentives. The \$369-billion climate package recently passed by Congress contains a significant increase in EV subsidies, including novel incentives on used cars.

Charging is another issue. While homeowners can install their own EV charger in a garage, most people who live in apartment buildings and condos don’t have that option. The state plans to require multifamily housing landlords to provide some way to charge electric cars, but the details are still being worked out.

Last year’s federal infrastructure legislation included billions of dollars for public fast-chargers to be installed at regular intervals on interstate highways.

As part of the California mandate, the state will require specific levels of warranty protection for EV batteries and related components. According to Randolph, that will not only protect new car buyers but also help ensure that reliable used EVs will become available.

“We understand that not everyone can buy a new car,” she said, pointing out several existing state programs that offer financial help for lower-income customers to buy EVs.

Brian Maas, president of the California New Car Dealers Assn., which represents more than 1,200 franchised new car and truck dealer members, said the organization is “all-in” on the transition to zero-emission vehicles.

“We just want to make sure that as we proceed along this path, we’re all working together to answer all these questions,” he said.

The biggest challenge could be customer acceptance at the 100% level. What happens if automakers can’t coax enough customers to buy?

Said Jennifer Gress, head of the Sustainable Transportation and Communities Division at the air resources board: “We always reserve the right to amend the regulations at any point.”

San Diego Union-Tribune, August 25, 2022

[California bans sales of all gasoline-powered cars and trucks by 2035](#)

By Rob Nikolewski

rob.nikolewski@sduniontribune.com

As expected, the [California Air Resources Board](#) voted Thursday to [adopt sweeping year-over-year targets](#) to eliminate the sale of new cars and trucks powered by internal combustion engines in the state by 2035.

The board approved the mandate in a unanimous vote, which codifies and adds specifics to an executive order issued in the fall of 2020 by Gov. Gavin Newsom aimed at drastically reducing vehicle emissions.

The new standard will have significant impacts beyond the Golden State because California accounts for about 10 percent of all new vehicle sales in the U.S. and 16 states follow California’s lead when they set their own emissions standards.

“This is a historic moment for California, for our partner states and for the world as we set forth this path to a more zero-emissions future,” said [Liane Randolph, chair of the Air Resources Board](#), known as CARB for short.

The regulation requires at least 35 percent of model year 2026 passenger cars and trucks sold in California will be electric vehicles, plug-in hybrids or hydrogen fuel cell vehicles. The numbers ramp up each year, going to 68 percent in 2030 and 100 percent by 2035.

CARB’s new rules also impose requirements that include:

- all-electric and hydrogen fuel cell vehicles will need a minimum range of 150 miles to qualify
- plug-in hybrids must increase their all-battery range to at least 50 miles
- a cap will be placed on the number of plug-in hybrids sold — no more than 20 percent of all sales will be allowed each year in order to encourage sales of cars and trucks that emit no emissions
- by model year 2030, all batteries must maintain at least 80 percent of their ability to hold a charge for eight years or 150,000 miles, and
- drive train components are covered for at least three years or 50,000 miles.

More than 50 people addressed the board during the public comment period of the meeting in Sacramento, either in person or via webcast.

“This is the most important and transformative action CARB has ever taken,” said Daniel Sperling, a [board member since 2007](#), “and it has global implications.”

Carmakers have accelerated their production of electric vehicles, known as EVs, and have stepped up plans to introduce more makes and models in the coming years. A number of automaker representatives appeared before the board Thursday to say they supported the new regulation, although some expressed concerns.

Laurie Holmes of Kia Worldwide said the targets will be “extremely challenging” and cited issues such as high material costs, strained supply chains and not enough charging stations.

“Healthy charging infrastructure is essential to ensure that driving an EV is as convenient as driving today’s traditional vehicles,” Holmes said.

Others worried whether drivers in rural areas, lower-income communities and small businesses could get left behind.

“This is just adding another expense to my business,” said [Marcus Gomez, owner of a clothing recycling firm](#) and a regional director for the California Hispanic Chamber of Commerce. “I don’t know how you’re going to come up with all these electric medium-sized vehicles when you can’t even buy a gas vehicle right now in the time that you’ve allotted here.”

To help address equity issues, staffer [Anna Wong of CARB’s Sustainable Transportation and Communities Division](#) said the targets are complemented by the recently passed state budget that earmarks \$2.7 billion this fiscal year and \$3.9 billion over three years for infrastructure and “clean mobility options for California’s most environmentally and economically burdened communities.”

[Board member Hector De La Torre](#) compared adoption of EVs to the growth of gas stations that spurred the spread of automobiles in the 20th century.

“We are way ahead of that transition in 2022 in California, and we’re going to keep pushing the bar,” he said. De La Torre predicted the prices of EVs will drop and equal the costs of gas-powered cars and trucks by 2025 or 2030.

“Zero-emission options are going to be available at price parity with internal combustion engines sooner rather than later, certainly in the time of this regulation,” he said.

As for how the vehicle targets will work, the regulation does not put the onus on California car dealers. The burden will be on manufacturers to deliver sufficient inventory of zero-emission vehicles onto dealers’ lots.

“It’s the automakers that are in compliance,” Joshua Cunningham, chief of CARB’s advanced clean cars branch, told the Union-Tribune earlier this week. “We require them to report to us every year with how many cars they’ve sold. And that gets tracked against the actual annual requirement.”

What if the year-over-year targets prove harder to meet than anticipated?

“The key things we do with any regulation, and we’ll certainly be monitoring this one closely, is how is the market doing,” said Jennifer Gress, chief of CARB’s Sustainable Transportation and Communities Division, in a call with reporters Wednesday. “So we will continue monitoring the implementation of this regulation and we always reserve the right to come back and propose amendments if we feel they are warranted.”

CARB estimates the mandate will reduce smog-forming emissions from passenger vehicles by more than 25 percent in 2037.

Sacramento Bee, August 25, 2022

[California becomes first state to end sales of new gas-powered cars. Total ban by 2035](#)

By Randy Diamond

rdiamond@sacbee.com

The California Air Resources Board approved sweeping new regulations on Thursday afternoon that would require 35% of new cars sold in the state to be electric vehicles by 2026 — and 100% by 2035.

The regulations, the first of their kind, would end the sale of new solely gasoline or diesel cars in California in just 13 years.

“This is transformative,” said Daniel Sperling, a member of the air resources board and a founding director of the UC Davis Institute of Transportation Studies.

He said California’s efforts in approving the rules and reducing pollution will be remembered as a historical event and will likely be followed by other states.

The vote may be considered extreme by others, said John Balmes, the physician member of the board, but he said board members were doing the right thing, putting the path forward to eliminate polluting gas-powered vehicles.

He compared it to the change from horse-powered transportation to automobiles at the turn of the 20th century.

The electric vehicle future will come quickly in California because manufacturers will have to start limiting the sales of gas-powered cars in four years. But there will be a host of challenges, including affordability of electric vehicles for many, a shortage of cars, and a lack of car chargers, producing vehicle range anxiety.

CARB’s plan increases the number of new cars that must be electric to 35% in 2026, 51% of all new car sales in 2028 and 68% in 2030, until 100% is reached in 2035.

The ruling would not force motorists already owning gas or diesel-powered vehicles off the road.

But it might be more difficult to buy a gas-powered vehicle in California by 2026. Car manufacturers will face \$20,000 fines per vehicle if they don’t meet the new requirements that 35% of the new cars they sell are zero-emission vehicles.

If California dealers run out of their gas-powered or diesel vehicle allocation, motorists would have to go to Arizona or another state that has not adopted the California regulations.

There would be one exception. Manufacturers will be allowed to sell plug-in hybrid models — up to 20% of the vehicles sold — as meeting zero-emission requirements. Those vehicles, however, will have to feature larger batteries to ensure increased capacity for the cars to run longer on an electric charge.

Vehicle manufacturers speaking at Thursday’s air resources board meeting said they supported the electric car mandate but questioned whether regulations were moving too fast and whether they could meet the requirements for large numbers of zero-emission vehicles quickly.

“Automakers could have significant difficulties meeting the set targets given elements outside of the control of industry, “ said Laurie Holmes, senior manager for government and regulatory affairs for automaker Kia. “These include, but are not limited to, significantly higher material costs, stressed supply chain and sourcing, inconsistent consumer incentives and inadequate charging infrastructure.”

Numerous business groups spoke out against the proposal Thursday, including those representing Hispanic business owners. They said the added costs of buying an electric vehicle will put a burden on small businesses.

The average cost of a new electric vehicle in California is \$66,000.

While electric car sales in California exceeded 15% in the first half of 2022, there are months-long waiting lists for some models.

One of the issues that will have to be sorted out is a shortage of chargers to power the vehicles, particularly in California rental complexes, where one-third of the state's residents live.

This raises potential equity issues over whether poorer and middle-class residents will have the same ability to buy an electric car.

Last year, a state subsidy program to provide a minimum of \$4,500 in grants for electric car purchasers ran out of money around mid-year.

"It was very frustrating," said Keith Hamilton, co-executive director of the Central California Asthma Collaborative, which runs an electric car equity program.

California officials say billions of dollars in new state and federal subsidies will be available for electric car purchasers.

State regulators say they are also studying new rules to increase the number of chargers required beyond a few parking spaces in rental complexes.

Overall in California, a state report found that 1.2 million chargers will be needed for the 8 million zero-emission vehicles expected in California by 2030.

Around 70,000 public chargers are currently in operation in California.

Another issue: Can the California power grid support the charging of millions of more vehicles?

Thursday's action by CARB was no surprise — and was essentially a sure thing — after a 2020 executive order by Gov. Gavin Newsom requiring 100% of new car sales to be zero-emission vehicles by 2035. Newsom controls 12 of the 16 seats on board.

Seventeen other states — including New York, New Jersey, Oregon and Washington — follow California rules that mandate stricter tailgate emissions standards, and at least some of those states are expected to adopt California's rules to eliminate the sale of gas-powered cars.

California operates under a waiver from the federal Environmental Protection Agency for the cleaner tailgate standards and another waiver, which is expected, will be needed from President Joe Biden's administration to finalize the zero-emission car rules.

Former President Donald Trump had stripped California of the right to set its own climate tailpipe standards but it was restored earlier this year by the Biden administration.

Sacramento Bee, August 26, 2022

[California just set historic electric-car rules. Is state's power grid up to the task?](#)

By Ari Plachta and Dale Kasler

aplachta@sacbee.com, dkasler@sacbee.com

California has made its historic decision to outlaw the sale of new cars that run on gas or diesel after 2035. But putting millions of green-energy vehicles on the road poses challenges and concerns that some experts say could complicate the state's decision.

Among them: that electric cars will be too expensive, charging stations won't be plentiful, and an all-electric fleet will put additional pressure on the state's fragile power grid.

The grid's vulnerability became painfully apparent during two nights of rolling blackouts in the August 2020 heatwave — and near blackouts in July 2021.

The state relies heavily on solar and other renewables, which become less reliable during periods of high demand — particularly during heatwaves in the early evening as air conditioners continue to blast while the sun sets.

Earlier this year Alice Reynolds, president of the Public Utilities Commission, said, "Climate change is putting Californians at risk of further outages." These pressures prompted Gov. Gavin Newsom to ask the Legislature to loan PG&E Corp. \$1.4 billion to keep Diablo Canyon, the state's last nuclear plant, open another 10 years past its planned closure in 2025.

In written comments to the California Air Resources Board, which approved the sweeping new vehicle regulations Thursday, the Western States Petroleum Association said "electrification of the transportation sector will increase demand by around 300,000 gigawatt-hours statewide," which would amount to doubling electricity demands.

Jan Smutny-Jones of the Independent Energy Producers, an alliance of power generators, said "resources are very tight" and added: "As the owner of three Volts, I would ask the state to look in-depth at how we accomplish these goals. Transitions are complicated." Volts are plug-in hybrids made by Chevrolet.

Yet officials from the California Energy Commission said electric vehicle charging will "add only a small amount of demand onto the grid" and vehicle-related electricity demand is forecasted to make up less than 3% of energy use during peak hours in 2030.

"The Energy Commission is working to support this vision by preparing to deploy nearly \$4 billion in EV infrastructure while optimizing charging to help the electric grid," said Commission Chairman David Hochschild in a statement.

The ruling was passed in a widely anticipated vote after several hours of public comment by industry, advocacy, and scientific stakeholders.

Air board members hailed the significance of the decision and pledged to make it work in the years ahead. "We will not set up Californians to fail," said board member Tania Pacheco-Werner.

And Newsom — who initiated the regulations with an executive order two years ago — said the transition will be smooth.

"With the historic \$10 billion we're investing to accelerate the transition to ZEVs, we're making it easier and cheaper for all Californians to purchase electric cars. California will continue to lead the revolution towards our zero-emission transportation future," he said in a statement.

The regulation requires 35% of all new cars sold in the state by 2026 be either zero-emission, plug-in hybrid or hydrogen-powered. That percentage would increase to 68% in 2030 and 100% by 2035, setting California on track to meet its ultimate goal of carbon neutrality by 2045.

The board could fine manufacturers \$20,000 for every vehicle short of their target in a given year.

Newsom and regulators have looked to the transportation sector in its efforts to combat climate change, in large part because cars and trucks are responsible for half of greenhouse gas emissions in California and 80% of smog-causing pollutants. The new regulations would reduce greenhouse gas emissions from cars by more than 50% in 2040, according to air quality officials.

But other analysts said CARB regulators' vision relies on overoptimistic assumptions about electric vehicle pricing, grid reliability, and supply chain capability. Karl Brauer of iSeeCars, an automotive search engine and research site, said that like the zero emission vehicle standards that California sought to enforce since the 90's, he expects these to be revised to more "realistic" expectations. "There are limiting factors to EV production and sales right now," he said, pointing to high lithium prices and supply chain backlogs," Brauer said. "And thank god, because if there weren't, and people were buying them as rapidly as the government wanted them to, the grid would probably get overburdened."

Grid reliability is also a concern as California utilities regulators consider a significant reduction in the incentives paid to homeowners with rooftop solar panels.

"If you're undermining the solar market you might have to rely on natural gas or other things to charge the automobiles," said Grant Smith, an energy policy advisor with the Environmental Working Group. "This isn't easy, it takes a lot of planning... a decentralized centralized electric system is critical for the state in terms of having a resilient system."

Yet climate advocates like Kathy Harris, a clean vehicles expert at the National Resources Defense Council, lauded the plan as a "common sense" way to ensure future climate progress and address California's uniquely poor air pollution with the help of federal infrastructure dollars. Because the new regulations don't kick in until 2026, "There there is some time to figure out where the gaps are. But we've seen that investments coming to the federal government are actually sufficient to help to support infrastructure at least for the first several years of the program," said Harris.

Pacific Gas and Electric Co. said the company is "well into our journey to prepare the grid for growing electrification" and installing vehicle charging ports at commercial and multi-family residential buildings to prepare the grid for 12,000 of vehicle-related electric load.

Reuters, August 25, 2022

[California to end sales of gasoline-only cars by 2035](#)

By David Shepardson

david.shepardson@tr.com

California on Thursday moved to require all new vehicles sold in the state by 2035 to be either electric or plug-in electric hybrids, a landmark move that could speed the end of gasoline-powered vehicles.

California Governor Gavin Newsom first announced the plan to phase out vehicles that run only on gasoline by 2035 in September 2020. The California Air Resources Board voted on Thursday to approve the new rules, which set yearly rising zero- emission vehicle rules starting in 2026, but the Biden administration must still approve the new requirements before the plan can take effect.

California has moved faster than the federal government and other states in setting strict standards for vehicle emissions. More than a dozen other states have adopted California's earlier zero-emission requirements.

"This is a historic moment for California, for our partner states and for the world as we set forth a path toward a zero emission future," said CARB Chair Liane Randolph.

California officials said the rules by 2037 will cut by 25% smog-causing pollution from light-duty vehicles. The rules mandate that 35% of the new cars sold be plug-in hybrid electric (PHEV), EVs or hydrogen fuel cell by 2026. That proportion will rise to 68% by 2030 and 100% by 2035.

By 2030, there will be 2.9 million fewer new gas-powered vehicles sold, widening to 9.5 million fewer conventional vehicles by 2035, CARB said.

Steve Douglas, a vice president at the Alliance for Automotive Innovation, a trade association representing General Motors Co ([GM.N](#)), Volkswagen AG ([VOWG p.DE](#)), Toyota Motor Corp ([7203.T](#)) and other automakers, said on Thursday the CARB rules "are the most sweeping and transformative regulations in the history of the automobile."

Electric car maker Tesla Inc ([TSLA.O](#)) called for a faster route to all-electric sales, but the auto group said the regulations will be "extremely challenging even in California and particularly in the early years."

California is ahead of federal vehicle emissions rules, which currently extend only to 2026 and do not set yearly requirements for zero-emission models.

CARB's new regulation would allow automakers to sell up to 20% PHEVs by 2035. That may boost Toyota, which is investing heavily in plug-ins, and which agreed earlier this week to recognize California's authority to set vehicle rules.

Tesla, which produces only electric vehicles, said in [a July 26 filing](#) to CARB that the board should require 100% zero-emission vehicles by 2030 and increase the stringency of the standard by "reducing the use of polluting PHEVs in annual compliance." It also sought changes on battery and charging cord requirements.

Tesla Senior Counsel Joseph Mendelson said on Thursday the CARB proposal "is both achievable and paves the way for California to lead in electrifying the light duty sector."

CARB's proposal sets tough new requirements for plug-in hybrids, which currently must have at least 10 miles (16.1 km) all-electric range and will eventually need a minimum 50-mile all-electric range label to qualify.

CARB [projects that 183,000](#) out of about 2 million vehicles sold in California in 2035 will be plug-in hybrid.

The American Fuel & Petrochemical Manufacturers trade association on Thursday urged President Joe Biden and the Environmental Protection Agency to "reject California's request for a Clean Air Act waiver to proceed with this unlawful ban."

The group said federal approval "would hand over sweeping federal government authority to California regulators, effectively appointing Governor Newsom and CARB as car and truck czars for the entire United States."

The White House and EPA did not immediately comment. Biden has previously declined to back setting a firm date to phase out gasoline-powered vehicles. The EPA is currently working on the next round of U.S. emissions limits through at least 2030.

Seventeen U.S. states have agreed to adopt California's tailpipe emissions rules and 15 have backed its zero-emission vehicle requirements. A group of 17 other states has challenged the EPA's decision to restore California's authority to set emissions rules that was withdrawn under former president Donald Trump.

CNET, August 25, 2022

[California's 2035 EV Mandate and What It Could Mean for You](#)

By Andrew Krok

AKrok@redventures.com

California is the only state permitted to create its own emissions standards under the Clean Air Act. Other states are allowed to follow California's standards -- and, as of this writing, [more than a dozen](#)

[do](#) (PDF) -- but California is the only state actually capable of setting standards different than the federal ones. With a major new regulation being implemented, many are left wondering what effect this could have on the US' vehicular landscape.

Let's dive in and see what the [California Air Resources Board's proposed Advanced Clean Cars II Regulations](#) (PDF) might mean for your future driveway.

The CARB basics

CARB's Advanced Clean Cars II Regulations started life as [an executive order from California Gov. Gavin Newsom](#) in 2020. At its most basic, the regulations would ban the sale of internal-combustion passenger vehicles and light trucks by 2035, which means zero-emission vehicles would be the only vehicles allowed for sale beyond that point.

This won't be happening all at once, though. Instead, CARB will set quotas at various points in time between now and 2035. Starting with the 2026 model year, the regulations will require 35% of passenger vehicles and light-duty trucks to be zero-emission versions. That will increase to about 51% in 2028, growing in stringency each year until it reaches 100% in 2035.

There are some exceptions in this process. Medium- and heavy-duty trucks will be held to different timelines, and there are no regulations regarding used cars, so your mint-condition, no-salt 1993 Honda Civic isn't at risk of disappearing (unless it can't pass smog). Plug-in hybrid vehicles may still be sold and used after 2035, as well, although standards [may demand more electric-only range](#).

If this sounds pretty intense, it is. "This is monumental," said Daniel Sperling, a CARB board member, [in an interview with CNN](#) this week. "This is the most important thing that CARB has done in the last 30 years. It's important not just for California, but it's important for the country and the world."

California is far from the first location to move to ban the sale of internal-combustion vehicles. A [number of countries](#) have proposed similar regulations on similar timetables, give or take a few years. Since Newsom's announcement in 2020, several other states have promised to follow in California's footsteps, including [Massachusetts](#), [New Jersey](#) and [New York](#). The federal government has also [promised to stop purchasing gas-powered cars](#) for its fleets by 2035. More states should chime in once CARB votes to pass these regulations.

The responses

California represents one of the largest new-car markets in the US, so it's no surprise that many automakers have already expressed their support for CARB's new regulations -- or, at the least, they've promised to play ball, since many manufacturers already have plans to phase out internal-combustion engines on similar timelines.

"The CARB Advanced Clean Cars II rule is a landmark standard that will define clean transportation and set an example for the United States," said Bob Holycross, chief sustainability officer at Ford, in a statement.

"Toyota continues to share the vision of [greenhouse gas] reduction and carbon neutrality goals with CARB and the State," Toyota said in a press release. "In our recent communication, we acknowledged CARB's leadership in climate policies and its authority to set vehicle emissions standards under the Clean Air Act."

"General Motors and California have a shared vision of an all-electric future, eliminating tailpipe emissions from new light-duty vehicles by 2035," said a GM spokesperson in a statement. "We look

forward to working with California, as well as the other states, localities and the federal government on complimentary policies to achieve this shared vision."

"Stellantis is committed to net-zero carbon emissions by 2038, evidenced by our recent \$35-billion investment in vehicle electrification and related software toward the introduction of US-market battery-electric vehicles by 2030," said a Stellantis spokesperson in a statement. "These actions support the goals of California's Advanced Clean Car II rule."

Representatives for Hyundai and Volkswagen did not immediately return a request for comment.

The speed bumps

While CARB's plan may hit most people right in the warm-and-fuzzies, there's a whole lot standing between this moment, how it gets implemented and what effects that may have.

In 2019, the Trump administration revoked California's ability to set its own emissions standards. While the Biden administration has [since restored that waiver](#), that doesn't mean it's set in stone. [As The New York Times reports](#), attorneys general from 17 states have filed a lawsuit to revoke California's waiver once again. Oral arguments have not yet been scheduled, but in the event a judge rules in favor of the attorneys general, this could prevent California from implementing its policy.

There's also the matter of vehicle cost. [Automotive News reports](#) that the current average sales price for an electric vehicle is close to \$63,000, which is roughly \$15,000 more than the average new-car transaction price across all types of propulsion. Automakers have begun releasing less and less expensive electric cars as the technology grows in accessibility (thus lowering overall costs), but there's still a long way to go.

Supply is also a problem. Building *anything* can be troublesome at this point in time, and EVs are no exception, considering the quantity of special materials that are needed for components like battery cells and electric motors. CARB's mandate could funnel even more EVs to the states that follow it, leaving others in the dust as they wait for additional inventory to be made available, if it even can be. This will likely improve as automakers go all-in on EV manufacturing, but shorter-term situations may prove [frustrating for buyers](#).

Finally, there's the matter of infrastructure. Tesla's massive Supercharger network aside, many companies are still rolling out EV charging infrastructure in both populated and unpopulated parts of the country. Anyone who has [taken a road trip and needed DC charging](#) may have run across a bank of new chargers that simply isn't working, or is putting out demonstrably lower charging rates than a car can handle. This, too, is improving in time, but shorter-term growing pains will still prove tricky for some buyers, especially those who don't own a home and cannot install a Level 2 charger near their parking spot.

KMPH-TV26 (FOX Fresno), August 25, 2022

[CA Air Resources Board greenlights plan to ban sales of gas-powered cars by 2035](#)

By Christina Lopez

The state's Air Resources Board gave its approval for the plan that would ultimately ban sales of gas-powered cars by the year 2035.

The goal is for automakers and car manufacturers to create incentives and offer discounts to new electric car owners to make sure the state meets the 2035 deadline.

"With the historic \$10 billion we're investing to accelerate the transition to ZEVs, we're making it easier and cheaper for all Californians to purchase electric cars. California will continue to lead the revolution towards our zero-emission transportation future," said Governor Newsom.

The approval for the plan looks closely at a series of deadlines.

35 percent of all new cars sold in the state are required to be electric by the year 2026.

By 2030, that percentage jumps to 68 and by 2035, 100 percent of all new cars sold within the state must be electric. This means 100 percent of new car sales in the state are to be zero-emission vehicles or ZEVs by 2035.

In an effort to cut down on the state's pollution levels and worsening air quality, Governor Gavin Newsom said Californians can help to solve the current climate crisis.

"California now has a groundbreaking, world-leading plan to achieve 100 percent zero-emission vehicle sales by 2035," said Governor Gavin Newsom in a statement issued after CARB's approval of the new rule to make all cars ZEVs by the 2035 deadline.

This requirement include all new trucks, sports utility vehicles operate as electric or hydrogen-powered vehicles. According to CARB, the 2035 requirement will set a minimum standard for how far the vehicles can travel and incentivize automakers to give discounts to make purchases more affordable.

"This plan's yearly targets – 35 percent ZEV sales by 2026, 68 percent by 2030, and 100 percent by 2035 – provide our roadmap to reducing dangerous carbon emissions and moving away from fossil fuels. That's 915 million oil barrels' worth of emissions that won't pollute our communities," continued Governor Newsom.

The goal is for automakers and car manufacturers to create incentives and offer discounts to new electric car owners to make sure the state meets the 2035 deadline.

"With the historic \$10 billion we're investing to accelerate the transition to ZEVs, we're making it easier and cheaper for all Californians to purchase electric cars. California will continue to lead the revolution towards our zero-emission transportation future," said Governor Newsom.

Ford Authority, August 25, 2022

[Ford Officially Endorses Expected CARB Vote For 2035 ICE Sales Ban](#)

By Brett Foote

Back in March, the Environmental Protection Agency (EPA) reinstated California's [right to regulate automotive emissions](#) under the Clean Air Act after former President Donald Trump [set forth in motion a plan](#) that would eventually strip it and other states of their ability to set their own standards. Since then, a number of states and countries have imposed a future ICE sales ban of some sort, including [Washington State](#), [New York](#), and [Canada](#), to name a few. Today, the California Air Resources Board is expected to vote on its own ICE sales ban – set to take effect in 2035 – and it's a move that Ford is publicly endorsing.

"At Ford, combatting climate change is a strategic priority, and we're proud of our partnership with California for stronger vehicle emissions standards, forged during a time when climate action was under attack," said Bob Holycross, Chief Sustainability Officer at Ford. "We're committed to building a zero-emissions transportation future that includes everyone, backed by our own investments of more than \$50 billion by 2026 in EVs and batteries. The CARB Advanced Clean Cars II rule is a landmark standard that will define clean transportation and set an example for the United States."

The proposed Advanced Clean Cars II rule aims to rapidly scale down light-duty passenger car, truck, and SUV emissions starting with the 2026 model year through 2035, and by 2035, all new passenger cars, trucks, and SUVs sold in California would be required to emit zero emissions. This move has been in the works for some time, as the state originally stated its intentions to impose an ICE sales ban [back in 2020](#).

Ford has long supported similar measures, previously [backing California's right to set its own standards](#) while also [joining a European Union-led petition](#) that calls for a 100 percent zero emission mandate by 2035 and [signing a pledge](#) to phase out all of its fossil fuel vehicles by 2040.

Virginia Mercury, August 26, 2022

[California's 2035 ban on new gas-powered cars set to apply to Virginia](#)

By Sarah Vogelsong

svogelsong@viriniamercury.com

California's decision to [ban the sale of new gas-powered cars beginning in 2035](#) will also halt the sale of such vehicles in Virginia due to a 2021 law linking the commonwealth to the western state's vehicle emissions standards, state attorneys have concluded.

In a Thursday email obtained by the Mercury, Assistant Attorney General Michael Jagels concluded that Virginia is "bound" by the California decision because the state chose to be "statutorily and regulatorily aligned with California."

Decoupling from California's path would require "an amendment or repeal of the mandating legislation," Jagels wrote.

A senior Republican confirmed separately that attorneys with the state's legislative branch had reached the same conclusion.

The ban, which if approved by the U.S. Environmental Protection Agency wouldn't take effect for 13 years, would not impact used car sales or prohibit anyone from driving older-model vehicles with internal combustion engines.

While Republicans are likely to seize on the issue as a potent talking point in the upcoming elections, the linkage of Virginia's vehicle emissions policy with California's is little surprise to either the state's environmental groups or its auto dealers.

In 2021, Virginia [Democrats pushed through legislation to adopt vehicle emissions standards](#) and electric car sales targets set by the California Air Resources Board (CARB) as part of the party's broad climate change agenda. The law, which has been hotly opposed by state [Republicans who tried but failed to repeal it in 2022](#), was supported by the influential Virginia Automobile Dealers Association.

Because of federal law establishing a two-year transition period, the California standards won't be effective in Virginia until early 2024, but once in force will bring Virginia in line with 14 other states and Washington, D.C. that have decided to follow the Golden State's path.

"The General Assembly did decide for Virginia to become a clean cars state and take advantage of the authority under the Clean Air Act to adopt more stringent tailpipe pollution regulations. And those measures do change over time," said Trip Pollard, an attorney with the Southern Environmental Law Center who lobbied for Virginia to join with California.

"We always knew there would be some new standards" over time, he said. "And given transportation is the number one source of carbon pollution, I think it was a safe bet that those standards would continue to try to cut pollution."

Under the federal Clean Air Act, states are forbidden from crafting their own vehicle emissions standards. The law allows states to choose to adopt either federal standards or stricter rules set by California.

Combined with California's status as the nation's largest auto market, that special authority has made the state one of the most influential drivers of national transportation emissions policy, setting a bar for vehicle standards that automakers frequently compete to meet.

On electric vehicles, the [automakers have increasingly fallen in line](#), pledging to shift their production away from vehicles with internal combustion engines and, in some cases, phase those models out entirely.

Those auto industry commitments were a major factor behind the Virginia Auto Dealers Association's support for the commonwealth's adoption of the California standards.

Don Hall, the association's president, is forthright that the group's backing had little to do with concern over environmental or climate change issues.

"It's really not about that," he said. "It's the fact that (the big automakers) have made the commitment to manufacture and provide EVs, and I don't want to see Virginia's dealers be left out in the cold and not have EVs available."

Virginia consumers have in recent years complained about a lack of availability of electric vehicles on car lots. Hall said that's directly related to manufacturers prioritizing shipping EVs to states that have aligned with California's zero-emission vehicle standards, which require an increasing proportion of sales to come from non-emitting vehicles.

"Part of the logic of buying into CARB in Virginia last year when all this was done was it was the only way we were going to get an appropriate number of EVs in Virginia," said Hall.

As the market shifts toward electric vehicles, however, that problem may disappear.

"To some degree it's a self-curing problem," said Hall, who also noted concerns with the state's ability to get infrastructure in place to support a growing reliance on electric vehicles. "The question is when does it self-cure by."

Pollard said he expects Republican opposition to the California standards to continue but hopes Virginia won't choose to return to the less stringent federal emissions standards.

"The move to cleaner vehicles is consistent with what the auto industry is doing and offers enormous environmental, health and economic benefits. ... It's a huge opportunity for clean air that I'd hate to see Virginia miss," he said.