

# Electric cars coming on fast: Climate worries, sinking prices put spotlight on EV sales

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Concerns about climate change, a bonanza of choices, falling prices and government support mean that a decade after the first modern, mass-market electric cars appeared, the American public is beginning to embrace them—and the transition they represent.

Electric cars are increasingly mainstream, with Americans choosing

them because they're cheap to run, not much more expensive than gasoline-fueled cars and fun to drive.

Sometimes it comes as a surprise. Casey Herman works for a medical company in Indianapolis and was looking for a new car in 2017. He stopped by a local Chevy dealership for some test drives, including the company's Bolt electric car.

He bought it on the spot.

"I was blown away. I totally was not going to buy a car that day but I just loved it," he said.

When the first modern electric cars hit the market in the late 2000s, neither their pricing nor technology were ready for [prime time](#), said Britta Gross, a former General Motors director who now works at the Rocky Mountain Institute, an environmental think tank.

In the last five years, that changed.

"I've never seen a moment like the one we're sitting in right now," she said. "It feels very inevitable, finally, that this is going to happen, and consumers are going to love these vehicles."

In 2017, only about 115,000 purely electric vehicles were sold in the United States. In 2021, Americans bought 657,000, according to a report by Bloomberg New Energy Finance.

While that still represents a little less than 4% of all new car sales, the number sold last year was double that of 2020. Today dealers are selling out every EV they can deliver, and any used ones they can get their hands on, said Gross.

The United States is committed to shifting to cars that run on electricity rather than burning fossil fuels because of global warming. The U.S. transportation system is responsible for almost 30% of the nation's greenhouse gas emissions, making electric vehicles crucial to lowering America's carbon footprint. President Joe Biden has set a goal for half of new car sales in the United States to be EVs by 2030.

Car companies are embracing the change to meet global demand. At the U.N. climate conference in November, six major automakers including Ford and General Motors, pledged to stop sales of new gas and diesel vehicles by 2040.

Canada, the United Kingdom, France, Spain, the Nordic countries—and California—plan to phase out new sales of internal combustion cars by then. Globally, 9% of new car sales are now electric, according to the International Energy Agency.

Last year, 20% of new cars sold in Europe were electric. In Norway, which has thrown generous and abundant incentives at motorists, 90% of new cars sold were electric. And in China, the world's largest car market by far, electric vehicles are expected to make up 20% of cars sold this year.

## **An evolving market**

Climate change may be motivating many American EV buyers, but a surprising number of owners today couldn't care less about the environmental benefits.

"I'm not a tree hugger," said Karsten Blok, an IT manager who lives outside Austin in Hutto, Texas. "I'm not trying to save the world. I just like how it drives and I like what it does to my wallet."

In Bowling Green, Kentucky, Mark Minotti describes himself as "an ultra-conservative Trump supporter." Given that, he says people are always telling him they can't believe he drives an electric car.

"I say, 'It's cheaper than a regular car, why wouldn't you?'" said Minotti, who commutes 20 miles each way to work at the Smuckers Uncrustables plant there. "I've never spent more than \$20 a month to charge it. I'm saving \$100 a month in gas."

These next-generation EV buyers will make the difference between the U.S. reaching a climate-aligned future or not, said Bradley Lane, a professor of urban planning who researches electric vehicle uptake at the University of Kansas.

"These are the households who are making a lot of trips and look at their credit card bills and they see \$450 for gas and start thinking, 'Maybe when we replace this car, maybe an electric vehicle makes sense,'" he said.

Already, almost 1 in 4 Americans say they're at least somewhat likely to seriously consider going electric next time they buy a car or truck, according to the Pew Research Center.

Studies done by the University of California, Davis pinpoint the shift points in electric car ownership. The first buyers were [early adopters](#) who just wanted to have the newest tech. The next group likes innovation but wants to make sure the technology works.

"The third one is when you start to get to the mass market. They need to see the benefit, they need to see people driving it for a few years. We call them the early majority," said Gil Tal, director of the university's Electric Vehicle Research Center.

That early majority has already emerged in California, where more than 663,000 EVs have been sold, according to the California Energy Commission.

It's been slower to come to other parts of the country. In Indianapolis, "most people think cars should run on gas," said Herman. But his Chevy Bolt gets a lot of interest.

"People stop me all the time and ask me questions," he said. "They're scared to death of it but they're always blown away" if they go for a drive.

## **Sticker shock?**

People often cite cost as a reason to dismiss purchasing an electric vehicle. But Lane said more and more EV models fall into a price range people are willing to pay for a car.

"In the near term, there will be more," he said. Automakers plan to introduce at least 30 new models in the next two years.

There is tremendous interest in Ford's F-150 Lightning electric truck. Almost 200,000 people put down a \$100 for a nonbinding deposit before the company closed the waitlist in December. Deliveries of the vehicle, expected to start at \$40,000, are to begin this spring.

While the price of EVs can be higher than gas-powered cars, the difference can be offset by incentives such as federal tax credits, which for some models can be as high as \$7,500.

For the 2022 model year, the sticker price for a Nissan Leaf starts at \$27,400, the Chevy Bolt at \$31,500 and the Hyundai Kona Electric at \$34,000. The basic best-selling Tesla 3 is \$44,990.

Maintenance fees are lower on electric cars because they don't have engines so don't require oil changes and have far fewer mechanical parts to break down.

Matthew Moran, a biology professor at Hendrix College in Conway, Arkansas, says there's nothing much to do with his Ford Mustang Mach-E but drive it.

"I have 8,000 miles on mine, and so far all I've spent on maintenance was \$23 to rotate the tires," he said. "Ford has really hit it out of the park. This is the first Ford I've ever bought and I have been incredibly impressed with their quality."

He loves his car's little touches. Like most [electric cars](#), the space where the engine would be is a front trunk, called a frunk. The Mach-E's has a drain in the bottom—fill it with ice, add a case of beer and you're ready for football.

"We took it tailgating a few times and had a blast," Moran said.

The low per-mile cost to operate EVs also is celebrated by owners in their numerous Facebook groups.

Nissan Leaf owner Brent Newman mostly charges at night.

"That's when electric rates are cheaper, so it costs me about \$2.60 to fill my 'tank' with electrons," the Denver resident said last week, as the price of gasoline at the pump soared. "Doesn't that sound attractive right now?"

While some media reports suggest EVs have higher fuel costs, they presume most charging is done at public charging stations, which can be expensive. The Department of Energy estimates on average 81% of

charging is done at home, 14% at work and 5% at commercial chargers.

On March 7, when the average price of gas was \$4.10, Department of Energy chief analyst Matteo Muratori calculated that filling up a new midsize gasoline car cost over \$55. The equivalent fueling cost for an electric vehicle was between \$20 and \$45 at public fast-charging stations, but \$16 or less when charging at home where most charging is done, including charging equipment costs.

## **Range anxiety**

The biggest downside of electric vehicles is their limited range and that charging stations are not yet as ubiquitous as gasoline stations. But this "range anxiety" is becoming increasingly outdated, said Tal.

"There's a lot of misconceptions in the market about range," he said.

"Five or six years ago we had 80-mile-range cars. That's now a historical artifact, like a Model T."

Today, the average, fully charged EV can go 250 miles; some can go up to 400. That's more than enough for the driving needs of the vast majority of Americans, Tal said. Before COVID-19, the typical American traveled 40 miles a day, according to the Bureau of Transportation Statistics.

In Texas, Blok thinks of his electric car as covering 95% of his transportation needs. His friends tell him they could never drive one because once a year they go hunting.

"I say, 'Well, maybe that one time of year you need to rent a car,'" said Blok. That's what he does when his family goes camping. "Renting a truck for a weekend is a lot cheaper than what I'd pay if I had a gas car," he said.



The biggest adjustment to an electric vehicle is the charging process, which can take from minutes to hours depending on the speed of the charger, how low the battery is and the car type. But as much as 95% of charging takes place at home, said Gross, mostly using a 110 standard electric plug or, for faster charges, a 240-volt dryer plug.

That was one of the happy discoveries made by Steward Eastman, of Abita Springs, Louisiana, about his Nissan Leaf.

"I thought I'd have to go to the charging station all the time. But I just plug it into a 110 socket on the outside of my house at night and when I wake up, it's charged," he said.

While new electric car drivers fret about running out of power, it's uncommon, said AAA's director of automotive engineering, Greg Brannon. "Mostly it's that they've locked their key in their car or run into a ditch," he said.

So far, only about 2% of the calls AAA gets for [electric vehicles](#) are because they've run out of charge. In some markets, however, AAA has begun offering roadside charging.

## Future of charging

While still a work in progress, America's charging infrastructure is improving quickly. Last year's federal infrastructure package, which Congress passed in November, included \$7.5 billion to add 500,000 chargers to the nation's network.

And by May 13, the Department of Transportation will publish [national standards](#) for EV chargers, an important first step for the still-evolving network where not all chargers work the same. Tesla, for example, which makes America's best selling electric car, has a proprietary



network of 1,300 "superchargers" that are currently open only to its customers.

"The national charging infrastructure system will be just as important and confidence building as the national highway system," Gross said.

Quinton Lawman lives in Parma, Ohio, and makes regular trips to Buffalo, New York. Four years ago when his family first got their Chevy Bolt, there was just one charging station along the way.

"Now there are six," he said.

For longer trips, planning is required. There are apps that map the various charging stations around the country and calculate the best route.

"If you do a road trip, you have to plan. But it's not hard," said Lawman. "I spend like 10 minutes on the apps and then I'm good to go."

The effort, he and many other EV owners say, is worth it.

"I can tell you until I'm blue in the face how much fun instant torque is, but until you drive one you're not going to experience it yourself," said Lawman.

Kelly Davis, of Huntington Beach, California, bought a Ford Mustang Mach-E last year and hasn't looked back.

"To be perfectly honest, I fell in love with its looks. I'll admit it, I'm shallow. But the car is awesome," she said. "You've got to be careful of the speed because oh man, does it go fast. I tell my husband he can't drive my car because he'll get a ticket."

Paul Bordenkircher, who owns a Chevy Spark, does sound for big shows

on the Las Vegas Strip. He loves the quiet.

"Turn the radio off," he said, "and the only noise is the wind in my hair and the wheels on the road."

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