

AoW #1

1. Mark your confusion.
2. Show evidence of a close reading on the page.
3. Write a one-page reflection in your WN

The Future of the Electric Car

After years of talk but little action, automakers are starting to churn out all-electric vehicles. But will anyone buy them?

Are electric cars selling?

Yes, though to a very limited number of early adopters. Tesla Motors has sold more than 1,000 of its \$109,000 Roadsters, and tiny startup Commuter Cars has moved about 10 of its odd-looking, \$150,000 Tangos. The much cheaper Chevrolet Volt and the Nissan Leaf will hit select markets later this year, and tens of thousands of people have already put their names on waiting lists to reserve one. Mitsubishi and Ford plan to debut their electric cars next year, and several other automakers, from giants such as Ford and Toyota to indies such as Fisker and Coda, are scrambling to get into the electric game.

Why now?

The concept of electric cars, which run on large rechargeable batteries as opposed to gas-powered internal combustion engines, has been around for decades. But rising climate-change fears, tougher fuel-efficiency standards, billions in government subsidies, and rivers of venture capital appear to be creating a tipping point that could move electric cars from the transportation fringes into the mainstream. “This is a game-changer for our industry,” says Nissan CEO Carlos Ghosn. Yet there are considerable obstacles—starting with the price.

What do electric cars cost?

A lot more than traditional cars. In general, electric cars carry about a \$15,000 premium over comparable gas-powered models, because their batteries can cost up to \$20,000 apiece to make. The Volt’s base price is \$41,000, while the Leaf goes for about \$33,000. But hefty federal tax credits should drive the sticker price down by up to \$7,500 per car, and some states are offering additional tax incentives. Even with the discounts, though, it would take more than a decade for a buyer to recoup the premium in gas savings. Still, advocates say that with improvements in the manufacturing process, batteries could drop by \$10,000 apiece by 2020, and that more people will make the switch when their gas savings more quickly compensate for the higher price of electric cars.

How long does a charge last?

It depends on the car. Tesla Motors claims the Roadster can go up to 245 miles on a single charge, while Nissan says the Leaf can get up to 100 miles. The key phrase is “up to.” Weather, speed, and the use of accessories like air conditioning can significantly decrease their range. The Environmental Protection Agency hasn’t yet figured out how to accurately measure range, so those numbers are even fuzzier. This uncertainty stokes what has become known as “range anxiety”—the fear of being stranded miles from a charging station with a dead battery.

Where do you plug them in?

At home, for starters. A standard 120-volt outlet can charge the cars in six to eight hours. But you can also buy a 220-volt charging station for about \$2,000 that cuts the charging time in half. (The first 4,400 Volt buyers will get one for free, subsidized by grant money from the U.S. Energy Department.) Meanwhile, cities and states are developing public charging stations—some of which will provide a charge more quickly than the home-based versions. A federally sponsored initiative called ChargePoint America is currently working

to install charging stations in nine metropolitan areas, including New York, Washington, D.C, Detroit, and San Francisco.

How ‘green’ are electric cars?

The cars themselves give off no emissions, so they are vastly cleaner than carbon-dioxide-spewing, gas-powered vehicles. But the question gets complicated when you consider the source of electric cars’ energy. A recent MIT study found that electric cars charged in states with strong nuclear or renewable energy sources are indeed greener than normal cars, but those in states that rely on coal plants can be worse for the environment than gas-powered vehicles. There is also the question of how to recycle the dead lithium-ion batteries, which, though containing none of the caustic chemicals of conventional car batteries, can weigh hundreds of pounds and aren’t suitable for landfills on a large scale.

Do these cars have a real future?

Demand is high now, but that’s mostly because companies will start out making relatively few of them. Chevy, for example, plans to turn out only 10,000 Volts in 2011. It remains to be seen whether large numbers of Americans—accustomed to cheap gas and long gaps between fill-ups—will be able to make the adjustment. A bipartisan group in Congress mounted an effort to ease the transition, proposing a bill aimed at making half the cars sold in the U.S. electric by 2030 through expanded subsidies, tax credits, and a \$10 million prize for whoever develops the first commercially viable battery with a 500-mile range. The bill was inserted into the recent energy bill, but it stalled in the Senate under a Republican filibuster threat. Nevertheless, electric car advocates believe that as battery technology continues to advance, electric model prices someday will fall to the point that millions of us will be driving one. “This is not a false dawn,” said Paul Scott of the advocacy group Plug in America. “This is the real thing.”

When cars are too quiet

Hybrids and electric cars are famously quiet—so much so that they can pose a threat to the blind, or anyone, for that matter, who steps off the curb without looking. The Volt, therefore, is being designed to chirp, while the Leaf will make a soft whirring sound that changes pitch depending on speed. And the U.S. Congress is considering a bill that would require manufacturers to install noisemakers—or “vroomtones”—in new hybrids and electric vehicles. While these precautions are understandable, data from the National Highway Traffic Safety Administration show no increase in pedestrian traffic fatalities since the dawn of hybrids. “There’s a lot of scaremongering in the media portraying these cars as some kind of shark in the water,” says NoiseOff.org founder Richard Tur. “But I don’t see people getting run over left and right by them.”

Possible WN topics:

- Would you be interested in buying an electric car? Why? Why not?
- Do you think the emergence of electric cars is a “false dawn”? Will they last, or are they a fad? Why? Why not?
- Should Congress mandate “vroomtones”? Why? Why not?