In 1910, Electric Cars Were the Best Vehicles on the Road. What Happened?

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Finally, the world is embracing the electric car. Governments across the world have pledged to replace their gas-powered fleets with hybrids or fully electric vehicles, and accordingly Toyota, Nissan, and Ford are cranking out hybrid and fully electric cars. Solely electric vehicle manufactures are still considered to be the "upstarts" of the automotive industry, yet Elon Musk's Tesla is one of the fastest growing car companies in the world — and makes the best cars ever mass-produced.

But electric vehicles are hardly new. They've been around just as long as their internal-combustion cousins, and at the turn of the 20th century were considered to be the future of motor transportation. As it turns out, your Edwardian aunts and uncles were more than hip to the EV game, and not just in the experimental sense. Practical, reliable, and relatively safe electric vehicles were whispering along roads from Los Angeles to Sydney by 1910. Your tech-savvy great-greats would be reading today's headlines, mystified that in 2016 we're only now catching up to the past.

In the early 20th century, urban transportation (especially in crowded urban areas) still consisted mainly of horse-drawn carriages. For many, electric carriages were the perfect replacement for horses: They were quiet, didn't need to be fed, and even then, were considered a very "clean" alternative (read: no poop on the streets, a serious problem at the time). Even the disadvantages of the electric motors made them perfectly suited for city travel: streets and thoroughfares at the time weren't built for vehicles traveling faster than 20 mph anyway, and horses and trains were still preferable for long trips, so EVs' limited range was more or less a non-issue.



An electric wagon used for beer delivery in Detroit (1906)

In the first decade of the 20th century, postal services in Paris and London had fleets of electric wagons for delivering mail. New York supported a burgeoning electric wagon taxi industry (90 percent of the cars in taxi fleets were electric). In urban areas across America and Europe, delivery services starting replacing their horse-drawn wagon fleets with electric delivery wagons capable of hauling thousands of pounds of freight.

So why did it take another 100 years for the world to (re)embrace electric vehicles? As it turns out, the electric car of the 1900s suffered from the same obstacles that continue to hamper the industry in 2016.

It's important to understand that at the turn of the 20th century, electricity was still considered a bit of a novelty: Only about 3 percent of homes had access to electric power. Much like now, it was just damn hard to find a recharge. Thomas Edison, the father of electricity himself, pushed hard for electricity as the power source of the future, but especially in the blossoming automobile industry. Not only was Edison trying to perfect heavy-duty batteries capable of providing electric wagons with longer range and more power, he envisioned a world with adequate infrastructure: electric charging stations as a built-in feature of every home, building, and public space. His vision then sounds like a sales pitch for EVs now:

"Electricity is the thing. There are no whirring and grinding gears with their numerous levers to confuse. There is not that almost terrifying uncertain throb and whirr of the powerful combustion engine. There is no water-circulating system to get out of order, no dangerous and evil-smelling gasoline, and no noise."

Ironically, it was Edison's foray into manufacturing electric automobiles that contributed to its downfall. He paired up with a former employee by the name of Henry Ford to devise a cheap mass-produced electric vehicle. The electric cars were ridiculously expensive at the time, anywhere between \$1000 and \$3000 (compared to \$25 to \$100 for a horse, and around \$600 for a Model T). Then Texas found crude — lots of it — and gas got cheaper than producing electricity. The oil industry, perhaps cognizant of its natural disadvantages, set about creating one of the most powerful lobbying groups in the history of capitalism.



The Ford EV prototype (1913)

To his credit, Ford — who was on his way to becoming one of the richest men in the world by producing cheap cars with gas engines — invested the equivalent of \$31.5 million into the electric vehicle project with his former boss (100 years later, Ford Motor Company announced it would invest about \$135 million in its "brand new" electric vehicle project). While the more conspiratorial-minded argue that the project fell apart due to Ford's under-the-table dealings with the oil industry, Ford biographer Ford Richardson Bryan lays out the case that it was Ford's loyalty to Edison that ended up being the project's undoing.

As the theory goes, Ford would use only batteries designed and built by Edison, ordering 100,000 of the batteries without properly testing them on his prototype. As it turns out, Edison's batteries — to use the proper technical jargon — sucked hind teat. The Edison batteries were literally incapable of getting the car to move. Ford's engineers begged him to use better batteries, but the famously stubborn Ford refused. When he found out that a couple of rogue employees tested the new electric prototype with heavier lead acid batteries from a different company, Ford flipped his Twinkies. Instead of investing in new batteries from one of Edison's competitors, he opted to cut his losses and shutter the project.

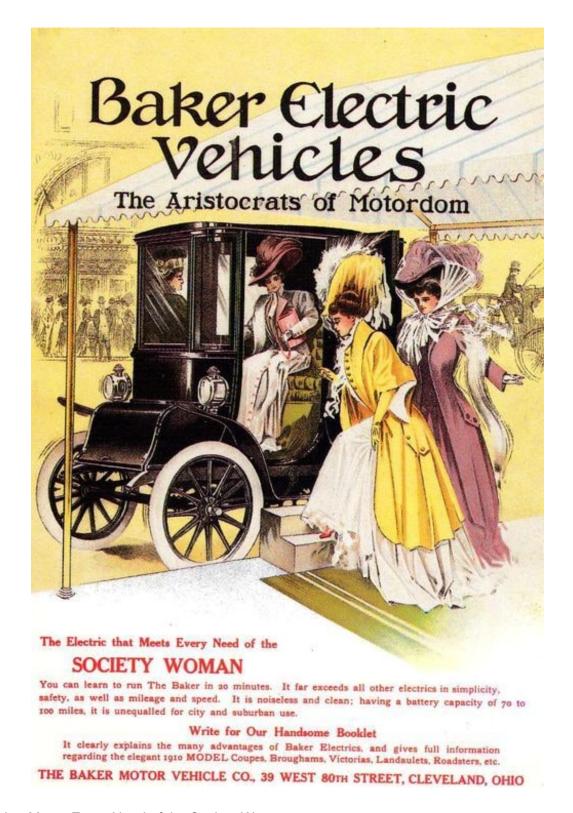
Even with Ford's failures, dozens of manufacturers were producing electric vehicles, and the technology was getting better and cheaper every year. While Edison failed in producing adequate batteries, his vision of citywide electrical grids was becoming a reality: Between 1910 and 1920, access to electricity had boomed from that 3 percent to a robust 35 percent. While home charging stations sounded like something out of *The Jetsons* as recently as 10 years ago, they in fact were becoming a practical and wholly feasible option before World War I. From a *New York Times*

article published in 1911:

"Now it is possible for an owner of an electric to install his own charging plant in his stable, and the electricity power companies are anxious to connect their feed wires to these individual charging plants."

Weirdly enough, one of the main reasons for the downfall of electric cars had little to do with limitations of technology, or even the cost, but rather gendered marketing. In fact, the battle between gas and electric car manufacturers is where we really start to see the development of the gendered aspects of car culture. As Deborah Clarke writes in her book *Driving Women: Fiction and Automobile Culture in Twentieth-Century America*:

"By designating the electric as a 'women's car,' men at one stroke reinforced their definition of proper femininity and attempted to confine women even more strictly within it."



The Electric that Meets Every Need of the Society Woman

Electric wagons began to be marketed almost exclusively as literal four-wheeled appliances for the ladies, who desired the "illusion of freedom" to travel around town as they liked, but couldn't quite handle the power or complications of "real" gas-powered cars, what with all those complicated levers and pedals and exhaust and clatter and such.

The Great Depression finished off the OG EV. Once the stock market crashed, both the money and will to develop more efficient electric vehicle technology and infrastructure all but disappeared. By the end of World War II, it was clear that the oil industry was king, and while it's doubtful Henry Ford was some pawn of the global oil cabal, there is

certainly evidence to suggest big oil played a major role in keeping electric cars off the road for the next, oh, 70 or so years. During which time the modern petroleum-fueled economy ravaged prairies and oceans, funded and justified wars, and pumped enough carbon into the atmosphere to assure the crash of the entire climate.

So, yeah, the world is finally getting back into the EV game. Meanwhile, Edwardian futurists watch from the ether, wondering what in the blue blazes took us so long.