

# Tesla Electric Cars: Revved Up, but Far to Go



J. Emilio Flores for The New York Times

Elon Musk has poured a lot of his money into Tesla, a maker of electric cars. Tesla has big ambitions but has met with delays and a personnel soap opera.

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EARLY last year, [Elon Musk](#), the chief executive of [Tesla Motors](#), strode into a giant hangar outside Los Angeles, in fitted jeans, leather boots and a designer jacket. With electronic dance music blaring, he whipped a black cover off a shiny silver car: a prototype of the [Model S](#), an all-electric sedan.

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Dewhurst Photography/Tesla Motors

The next generation of the Tesla Roadster will not be available until after the company has introduced its sedan, and that model has been delayed.

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Brendan Mcdermid/Reuters

Elon Musk last month with his son Griffin and the actress Talulah Riley, his fiancée, as they celebrated Tesla’s initial public offering on the Nasdaq.

“This is one of the most historic cars,” Mr. Musk told the gathering of customers, reporters and famous friends lounging on black-and-white couches beneath giant screens projecting photos of cars, beaches and, inexplicably, babies and explosions. “You’d have to go back very far to see when a car this important was unveiled.”

Like Tesla’s first automobile, an electric sports car called the [Roadster](#), the Model S was sleek, sporty and quiet as a whisper. For a certain class of deep-pocketed buyers, it was lust-inducing, even if they may have never before given a thought to torque or throttle. It would sell for \$57,400 — or \$49,900 after tax credits, or \$35,000 after factoring in gas savings, Mr. Musk advised his audience.

The sedan fits five adults as well as two children in rear-facing seats, Mr. Musk said, and could drive halfway across the country between breakfast and bedtime. It would, he said, be on the road in 2011. Tesla already had a factory lined up and hundreds of millions of dollars in financing on the way from the Energy Department.

Today, production of the Model S hasn’t even begun. Some [critics doubt](#) whether the sedan can actually transport seven passengers. And Mr. Musk concedes that driving halfway across the country would take at least 16 hours at a rather heady average speed of 75 miles an hour — not including stopping at swapping stations that Tesla has yet to build to change a heavyweight battery that will have, at best, a 300-mile charge.

Now Mr. Musk says the Model S will be on the road in 2012. The federal loans didn’t land in Tesla’s coffers until this year, and the factory, like two before it, fell through.

Still, the company has made some concrete strides. It [recently bought](#) a closed [Toyota](#)-G.M. plant in Fremont, Calif., and Toyota invested \$50 million in Tesla as part of a partnership to jointly develop [electric cars](#). While Tesla managed to sell its shares to the public for the first time last month, raising \$226.1 million, the shares have dropped to \$21.29 from an early high of \$30.42.

“It eerily reminds me of [the DeLorean](#),” says Scott Sweet, a partner at a financial advisory firm called IPO Boutique, referring to the futuristic, stainless-steel sports car with gullwing doors built by [John DeLorean](#) in the early 1980s.

Mr. DeLorean attracted high-profile investors and dreamed of building the next great automobile enterprise company, but ultimately went bankrupt after producing just one model. Mr. Musk, 39, shoots down the comparison.

“Tesla’s really not about starting a car company,” he says. “It’s really about accelerating the transition to a new phase of technology in the car business, and I think it would be very difficult to start a car company where you don’t have really any differentiated advantage, where you’re just another gasoline car.”

“And at the end of the day,” he adds, “the DeLorean was not a great sports car.”

Full of brio and spin, the response is vintage Musk — and yet another chapter in an entrepreneurial odyssey that is as emblematic of how reputations are made and undone in Silicon Valley as it is of Mr. Musk’s own strengths and weaknesses.

With a fortune derived from two hot Internet companies that he helped build and sell, Zip2 and PayPal, Mr. Musk has since invested almost all of his money and time in [SpaceX](#), a spaceship company aspiring to build low-cost rocket transports, and in Tesla. He’s also chairman of [SolarCity](#), a solar panel provider he helped start.

“I just felt like, because you only live once, you may as well work on things that are going to have an important effect,” says Mr. Musk.

Peter Thiel, a PayPal co-founder who now is a partner at Founders Fund, one of the largest outside investors in SpaceX, says the country needs more entrepreneurs like Mr. Musk who are willing to take risks.

“There aren’t very many people pursuing these sorts of hard technologies,” Mr. Thiel says, “and I think there is a sense that we need to be doing more of this as a country, as a society, if people are really going to have a better quality of life 20 years from now than they do today.”

Others see a darker side to the endless roadshow that is Mr. Musk’s life. People who know him describe him as so confident that he can achieve his goals that he sometimes speaks as if he already has.

“He’s done amazing things, but at the same time, he’s not a straight-shooter,” says Darryl Siry, Tesla’s former senior vice president for sales and marketing. “It’s a reality distortion field and it’s a powerful one. He gives the facts to fit the narrative he wants out there.”

WARRING narratives aside, Mr. Musk has an enthusiastic fan base.

“He’s one of these just unboundedly ambitious people; that’s probably the single most important thing about him, and he’s an eternal optimist, to a fault sometimes,” says Max Levchin, yet another PayPal co-founder, who has mended fences with Mr. Musk after a falling-out.

“Here’s this South African immigrant trying to tackle the biggest institutions and entrenched businesses you can imagine,” said Steve Jurvetson, a venture capitalist who met Mr. Musk when he was raising money for Zip2 and who has invested in Tesla and SpaceX.

When it comes to Tesla, however, it is difficult to see where the riches are, or whether they’ll arrive, at what continues to be a small, experimental venture. In 2009, Tesla lost \$55.7 million on revenue of just \$111.9 million. It faces a period without significant sales revenue because it plans to stop selling the current version of the Roadster in 2011 and will not start selling the next generation until at least a year after the Model S is out.

“Elon Musk put on a dazzling roadshow, deflecting the fact that they’re hemorrhaging cash,” says Mr. Sweet of Tesla’s recent public offering. “But going back to reality, people didn’t want a stock that has a sketchy future.”

In Mr. Musk’s world, though, there are no sketchy futures, even though he is the largest investor in and has presided over a company that has been riddled with delays, financial crises and a personnel soap opera.

Tesla has remained buoyant despite these challenges because it has deftly pitched a mix of sex appeal and environmentalism to the jet set. Some 1,200 people, Tesla says, have plunked down at least \$109,000 for the Roadster. Buyers are said to include [George Clooney](#), [Leonardo DiCaprio](#) and the [Google](#) founders [Larry Page](#) and [Sergey Brin](#).

In 2003, Martin Eberhard and Marc Tarpenning began pursuing production of an electric car and started Tesla. Mr. Musk had a similar interest, and after he met with the two men, he agreed in 2004 to make a \$6.35 million investment in Tesla and serve as chairman. Mr. Eberhard became chief executive.

Around the same time, electric vehicles were left for dead in Detroit as big automakers backed away from the market. But as batteries became more efficient, start-ups took a look at the possibilities. Tesla tried to take a whack at the fuel problem by packaging thousands of [lithium-ion](#) laptop batteries into one big car battery.

After Tesla unveiled its first car in 2006, it stumbled through delays and mounting expenses; by the end of 2007 it still hadn’t delivered an automobile to customers. Tesla fired Mr. Eberhard, igniting a volley of lawsuits, court filings and mutual mudslinging between him and Mr. Musk.

Mr. Eberhard now works on electric cars for the [Volkswagen](#) Group and says he plans to sell his Tesla stock because “I tend to invest in companies where I trust the management.” Mr. Musk [has said](#) that the bulk of Tesla’s early problems were caused by Mr. Eberhard.

The first Roadster was finally delivered — to Mr. Musk — in early 2008. By the end of that year, Tesla had gone through two more chief executives, a financial crisis had erupted, and Tesla was nearly broke and in need of a \$100 million transfusion.

Mr. Musk began clashing with his board. VantagePoint Venture Partners, one of Tesla’s early investors, had a director on the company’s board. But that director, Jim Marver, abruptly left the board after a blow-up between Mr. Musk and Alan Salzman, VantagePoint’s chief executive.

Mr. Musk says the spat was over differing visions, including Mr. Salzman's desire to dismiss most of the board members and appoint a new C.E.O. if he made a sizable investment, and Mr. Musk's belief that Mr. Salzman was "insistent on interfering in the company."

In a statement, VantagePoint said that "there have been times when we have disagreed on aspects of the company's strategy and management," but that the firm "strongly supports the company's mission and current direction."

That fall, Mr. Musk took over as chief executive, while remaining C.E.O. of SpaceX. He laid off 87 people, about a quarter of his staff, delayed the Model S and raised \$40 million from existing investors. He says he has personally invested \$75 million in the company, including an emergency loan as part of the financing in late 2008.

"If Tesla was to survive," says Mr. Musk, "I had to make a difficult personal decision there, which was to take all of my remaining capital and plow it into Tesla," except for a relatively small amount for living expenses.

He says that Roadster sales and Tesla's business selling electric powertrains for vehicles like Daimler's Smart car and Toyota's Rav4 would be profitable today if Tesla were not investing so heavily in building the Model S.

Some analysts doubt his math. "I don't buy it," Mr. Sweet says. "It is somewhat pie-in-the-sky."

In addition to his Tesla investment, Mr. Musk says he has funneled \$100 million into SpaceX and \$10 million into SolarCity; the total of \$185 million is nearly all his proceeds from the sale of PayPal to [eBay](#). (He sold \$24 million worth of his Tesla stock, in part, he says, because he recently ran out of cash.)

SpaceX, after three attempts to launch rockets that failed to reach orbit, [successfully launched](#) the Falcon 1 in 2008 and the Falcon 9 last month. It has public and private contracts to shuttle cargo and satellites to outer space.

Even in Silicon Valley, where confidence abounds, Mr. Musk's appetite for risk is unusually prodigious. His brother Kimbal Musk, an entrepreneur who co-founded Zip2, calls him "the double-down king."

"I don't think he has fear," Kimbal Musk says. "It's only a risk if you think there's a chance of failure. In Elon's mind, I don't think he thinks there's a chance of failure. He doesn't have the failure gene."

Sometimes, however, that means skating close to the edge. In 2008, for example, as Tesla was running out of money, Mr. Musk decided to accept down payments on the Model S and use the cash for operating funds — despite the fact that the Model S wasn't available and there was no guarantee that it ever would be.

Although Tesla has never had a profitable quarter, in February 2009, Mr. Musk sent a message to Tesla customers titled, "Tesla to Be Profitable by Mid Year." He wrote that "it appears highly likely that Tesla will meet the goal promised to those investors of becoming profitable by mid year."

And Mr. Musk defends his prediction. “I actually never said that Tesla would have a profitable quarter,” he says. And while most investors track profitability figures on a quarterly basis, he said his e-mail was technically correct because Tesla was indeed profitable in a single month in the middle of last year: July.

In the same 2009 message, Mr. Musk gave customers an update on a federal loan that Tesla had been waiting for from the Department of Energy’s program for advanced technology vehicles. He said he was “excited to report” that the federal government had informed Tesla that it expected to disburse funds to the company “within four to five months.” But Tesla’s application hadn’t even been approved yet, and the expected \$465 million in financing didn’t arrive until 11 months later. The government “ended up taking just a lot longer to get up with all the paperwork,” Mr. Musk says. He acknowledged that he has “been optimistic about dates” but says that “I’ve never once set a date knowing that date is impossible.”

OF course, entrepreneurs would never survive without buoyancy and optimism, and Mr. Musk has demonstrated an ability to turn some of his proclamations into reality.

Mr. Musk has never run afoul of federal regulators, but he has had a long history of friction with the news media. Some reporters who cover the company closely say Mr. Musk’s hyperbole sometimes crosses the line into what they regard as distortions.

“I don’t believe him,” says Ray Wert, editor in chief of Jalopnik, a blog about the auto industry. “He’s made so many prognostications in the past that just have been so completely wrong. I don’t think he’s lying. I actually believe that he believes what he’s saying. But I just think it’s nowhere near what the reality is. It never has been.”

Mr. Musk’s contentious relationship with Owen Thomas, a Silicon Valley blogger who has jostled with him for years, came to a head this month. In [a piece published](#) on the [Huffington Post](#), Mr. Musk accused Mr. Thomas of “mixing fiction with fact to spice up a story” about Tesla. Mr. Thomas [responded](#) on the blog VentureBeat, spelling out instances in which he believes Mr. Musk misled him, writing that Mr. Musk has “discovered that he could stretch the truth, casually and frequently.”

Mr. Musk has also used colorful language to disparage columnists for The Los Angeles Times and The New York Times who have written skeptically about his ventures. He remains acutely aware of the news media and cultivates the spotlight — and he’s not hesitant to try shaping the narrative himself.

For example, he has insisted that he be described in the press as a co-founder of PayPal and Tesla. He was the co-founder of a company called [X.com](#) that later merged with a company that ran the Web site PayPal. When the gossip blog Valleywag once suggested that Mr. Musk was not a real PayPal founder, he responded with a 2,247-word [piece](#) arguing that, in fact, he was.

Today, Mr. Musk says that he co-founded Tesla, but Mr. Eberhard says that “he was not there, and had never heard of the company, when the company was founded.”

To be sure, Tesla and SpaceX might be less vibrant companies if Mr. Musk lacked such brio. But sometimes, say colleagues who requested anonymity because they still work closely with Mr. Musk, his combativeness distracts from his management of his businesses.

He is now dealing with the fall-out from a divorce from Justine Musk, a fantasy novelist with whom he has five sons. Though the divorce itself is final — Mr. Musk plans to marry Talulah Riley, a 24-year-old British actress — he and his ex-wife are still fighting in court over financial matters.

Ms. Musk has said she feels that Mr. Musk misrepresented his finances when she signed a postnuptial agreement mandating that property they created during their marriage be kept separate.

She wants their \$10 million Bel Air estate, alimony and child support, \$6 million in cash, stakes in Tesla and SpaceX and a Roadster that is “glacier blue with beige interior.”

“I think my ex-husband is brilliant and works like a demon and deserves his success and his wealth,” she [wrote on her blog](#). “But I also think — after eight years of marriage and six kids (five surviving) — that I am entitled to a fair settlement.”

She says she is willing to settle. He says that he offered a settlement, which did not include stakes in his companies, and that she turned it down. Mr. Musk says the divorce “has caused me a lot of grief.” It has also intersected with Tesla’s affairs.

Shortly after VentureBeat [reported](#) this year that Mr. Musk had written in a divorce filing that he had run out of cash, Tesla filed an amendment with the [Securities and Exchange Commission](#) reassuring investors that Tesla is “no longer dependent on the financial resources of Mr. Musk” and that “we do not believe that Mr. Musk’s personal financial situation has any impact on us.”

A native of South Africa, Mr. Musk spent two years at Queen’s University in Canada and then transferred to the [University of Pennsylvania](#), where he earned a degree in physics and in business. In 1995, he enrolled at Stanford to pursue a doctorate in applied-materials sciences and to work on energy-storage ideas. Two days later, he dropped out, and he and his brother, Kimbal, started Zip2, which helped build maps and local directories for media Web sites.

“My thought process there was, I could work on this advanced capacitor for five years and then find out that, well, it’s just never going to work, or I could help build the Internet, and that seemed like a much more likely thing to succeed,” recalls Mr. Musk.

TESLA’S viability remains uncertain and will depend on uncontrollable factors like advances in battery technology, consumer preferences, oil prices and competition from big car companies readying their own electric vehicles.

“I see Tesla playing a role as a tech innovator, really pushing the envelope on the latest electric vehicle technology,” says Timothy Lipman, co-director of the Transportation Sustainability Research Center at the [University of California, Berkeley](#). “If Tesla can go out and do this without much money as a small company, it makes the automakers look really silly if they can’t do it.”

Though Tesla’s battery, built from tiny laptop cells, was an achievement when Tesla first built it, many analysts say Tesla will eventually need to upgrade to bigger batteries built for cars.

Other analysts say the company should have set its sights lower — by remaining a niche sports car company or concentrating on electric powertrains and partnering with a big automaker to produce the cars. In fact, they say, Tesla may succeed only as a subsidiary of a larger company.

Mr. Musk, uncharacteristically cautious, says that while he wants to remain independent, “at some point in the future there may be an acquisition, but it’s not in the near term — I don’t think.”

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