



Why the Next Car You Crave Will Be Electric

Wednesday, May 16, 2007

By Cade Metz



Dear Reader: One evening this past March, in the little town of San Carlos, Calif., I took a ride in your dream car.

If there was ever a vehicle whose design was inspired by PC technology, it's the [Tesla Roadster](#), a 100 percent electric car under development at a start-up just south of San Francisco.



Due on the market this fall, at a starting price of \$92,000, the Roadster is powered by the same [lithium-ion battery cells](#) that drive the average laptop or smartphone, and you can charge it from an ordinary wall socket.

It's even cooled as a PC is: Hot air is pushed away from the hardware and out through a vent in the rear.

Backed by some of the biggest names in Silicon Valley, including Google founders Sergey Brin and Larry Page, [Tesla Motors](#) has already assembled several Roadster prototypes, and when I asked for a ride, they invited me down.

No, I didn't get to drive one, though that might be for the best: Each prototype was built at a cost of over a million dollars, and only the lucky few covered by the company insurance policy are permitted behind the wheel.

But I did get the rush of sitting in the passenger seat of this Lotus-like two-door convertible. And what a rush it was.

Equipped with a 21st-century version of the AC induction motor, the Roadster goes from zero to 60 in about 4 seconds. But it's not just the acceleration that amazes, it's the way this car accelerates.

Unlike a gasoline-powered car, which has very little [torque](#) at low RPMs, the Tesla reaches 100 percent torque from the moment it starts forward.

You don't wait even an instant for that acceleration to kick in — the sensation is like nothing you've ever experienced.

And that's not the half of it. Even as the Roadster achieves sports-car performance, emissions are nonexistent — when I say 100 percent electric, I mean 100 percent electric — and according to the company, it gets the equivalent of 135 miles to the gallon.

Translation: If you charge the Roadster at night, during off-peak hours, you're paying as little as one cent per mile.

By comparison, if your car gets 20 miles to the gallon, and a gallon of gas is around \$2.50, each mile costs 12.5 cents.

For a first-generation Hummer, which averages 8 to 10 miles per gallon, it's more like 32 cents.

The car's 900-pound battery includes 6,831 lithium-ion cells, each about the size of an AA battery.

According to Phil Luk, the Tesla engineer who hand-built each prototype, the battery is equipped with 13 separate processors that monitor everything from voltage and temperature to smoke levels.

Plugged into an ordinary wall socket, it charges in about 7 hours. But if you use a specially designed home charging unit, which the company plans to include at no extra cost, you can power up in under 4 hours. According to Tesla, a full charge gets you 250 miles on the open road.

The car has yet to be independently tested — the final version doesn't roll off the assembly line until this fall — and what you may save on gas is offset by the initial \$92,000 price tag. But it's hard not to admire the Tesla simply as a feat of engineering.

As I said: This is your dream car.

Copyright © 2007 Ziff Davis Media Inc. All Rights Reserved. Reproduction in whole or in part in any form or medium without express written permission of Ziff Davis Media Inc. is prohibited.
