3-wheeled Aptera aspires to car-pool lane

High gas prices driving entrepreneurs into car biz

By Chris Woodyard
USA TODAY

CARLSBAD, Calif. — Bored working as an engineer for a biotech company, Steve Fambro began to dream of a better way to get to work.

Why not design a fuel-efficient car that would allow a single driver onto California’s car-pool lanes?

“Most people thought I was crazy,” Fambro recalls. “Some might still wonder when they see what emerged: a futuristic commuter car powered by electricity with a skin of epoxy resin, not sheet metal. And perhaps oddest, it has three wheels, not four.”

The Aptera, with a range of 190 miles between charges, is intended to sell for around $10,000.

It’s an example of how high gas prices are encouraging entrepreneurs to give the car business a try.

From electric high-performance roadsters to low-speed runabouts, startups are trying to take advantage of interest in alternative technologies.

Aptera is being developed in a tidy industrial park near San Diego. CEO Fambro, 41, and COO Chris Anthony, 31, a former stockbroker who also runs a bond-trading shop, have about 15 employees so far, mostly fabricators and engineers.

At present, Aptera has one working prototype of its electric car. A hybrid gas-electric version is being built. Production is scheduled for later this year.

Fambro says about 400 potential buyers have slugged down a $500 refundable reservation to get in line. Having received its first small investment from a company start-up investor, Aptera is currently looking for another round of financing. Anthony, who spends most of his time on investment matters, says he has attracted interest.

They are drawn by the unique design.

The prototype features high-tech mirrors that eliminate the need for rear and side view mirrors. They've been reduced to wind drag. There’s a solar panel on the roof to provide a bit of extra power.

Making the car out of laminates shaves its weight to about 1,500 pounds, making it potentially one of the lightest cars on the road. Less weight means less stress on the suspension, Fambro says.

Looking ahead: Aptera co-founders Fambro, front, and Anthony have about 15 employees, primarily fabricators and engineers.

The company hopes to use off-the-shelf lithium phosphate batteries that are proven and safe, Fambro says.

Even though there is a lot of work left to be done, Aptera has an advantage when it comes to development time. The three-wheel design — two in front, one in back — means the resulting vehicle will be classified as a motorcycle in many states, including California. The testing and road tape required to market a motorcycle is less rigorous than for a four-wheeler. It allows us to leapfrog into the market, Fambro says.

A four-wheel classification and Aptera’s electric drivetrain also fulfill his dream of developing a car that’s legal to drive solo in California carpool lanes.

But some involved with alternative-power vehicles warn that buyers could be dubious about the three-wheel arrangement.

Using the same protocol as the one followed by the Insurance Institute for Highway Safety, including a side, rear and 45-mile-per-hour frontal offset hit, Fambro says the car has a special nose that absorbs a frontal impact, pushing the frame down and away from passengers. “We want to define the brand based on safety and efficiency,” he says.

Even then, it could be a tough sell, says Ron Cogan, publisher of GreenCar.com, a website and journal devoted to environmentally friendly transportation.

“Consumers are hesitant to buy into new concepts until they prove themselves on the road,” Cogan says. “The market for three-wheel vehicles has been slim to none, and I don’t see that changing in a significant way anytime soon.”

There’s also the prospect that major automakers could race ahead and make their own unique alternative-energy vehicles. General Motors, for instance, has promised to have its Volt electric-gas vehicle in production in 2010.

Fambro says he isn’t worried because Aptera is more nimble than the giants. For example, when the company needed to choose low-rolling-resistance tires, it didn’t spend weeks or months quizzing manufacturers. The crew simply mounted each one they could find on a cart loaded with 400 pounds of sand, then rolled it down a hill and up the other side to see which tire would carry it the farthest. “You don’t need a six-month study to get good data,” he says.

Before production starts, managers are being issued copies of books detailing how Toyota cuts waste and encourages quality on assembly lines.

The goal is to produce two or three cars a week once production begins. The company expects to be profitable once production hits 150 vehicles.

If nothing else, Fambro is confident that Aptera will be a hit on the beaches near headquarters.

“You can lie down the front (passenger’s) seat and put in a surfboard,” he likes to point out.