

Battery-powered vehicle due in November claims 120-mile driving range

By Mark Maynard

San Diego Union-Tribune, Tuesday, March 25, 2008

It might look like a bird or a plane, but its name indicates it has no such ambitions.

A Carlsbad company named Aptera, a Greek word for “wingless flight,” has designed a battery-powered vehicle with a claimed 120-mile driving range, more than double that of most electric cars today. The two-seat, three-wheeled vehicle is engineered and fabricated of lightweight materials and has a top speed of almost 90 mph.

Deliveries of the first cars – technically a motorcycle – will begin in November with a sale price of \$30,000, Aptera co-founder and chief executive Steve Fambro said last week. A gasoline-electric version will soon follow, also priced about \$30,000.

More orders have been placed for the hybrid version, which uses a one-cylinder engine as a generator and will get more than 300 miles per gallon and have a range of 600 miles, the company said.

It was selfishness that motivated Fambro to build a highly efficient, three-wheeled electric vehicle.

“I wanted to ride in the carpool lanes by myself,” he said.

Fambro wanted to build a contemporary kit car with fuel economy of 50 to 60 miles per gallon, but none came close. He knew the concept was possible – it was just finding the right shape for the vehicle.

Working after-hours as an electrical engineer at Illumina, a San Diego company that makes tools for gene and drug research, Fambro chipped away at a prototype.

More than a year later, the solution came from Chris Anthony, the other Aptera co-founder, who has a background in boat building and has studied hydrodynamics and aerodynamics. Anthony, 32, conceived of the vehicle's unusual teardrop shape and the composites to create it.

“When driving a typical gasoline-powered passenger car, the engine uses about 70 percent of its power just to push air out of the way,” Anthony said.

The fluid shape has the lowest drag coefficient, he said.

In 2006, Fambro quit his job to focus full-time on his automotive development. He received start-up funding from Idealab and Esenjay Investments.

Then the company hired top automotive designer Jason Hill to integrate styling and function. Hill has worked for Mercedes-Benz and Porsche.

More than 1,200 customers have placed refundable \$500 deposits for both models through the company's Web site.

“We have mothers of soldiers in Iraq who have ordered a vehicle because they want to bring their boy home and help stop the addiction to imported oil,” Hill said. “We have environmentalists who see this as a bigger solution to the carbon problem. We have scientists who see it as the solution to a fundamental problem of dealing with energy in an energy-scarce world. And there are people who just want to save \$6,000 a year on fuel and maintenance costs. An Aptera can pay for itself in five years.

“This is the most efficient vehicle on the road in America,” he said.

General Motors is at work on a five-passenger gasoline-electric hybrid called the Volt, which will have a battery range of 40 miles and cost about \$30,000, but production isn't expected until 2010.

The price for the Aptera seemed a bit steep for Bill Hammons, president of the Electric Vehicle Association of San Diego. “But I'd pay it,” said Hammons, who owns two Ford Escape hybrid sport utility vehicles.

"The Aptera's 120-mile range exceeds the average working commuter's range by four times," Hammons said. "Although a 120-mile range is not for everybody, it would be more than enough for many drivers. Besides, it is clean, fast and a fun way to get from point A to point B."

The Aptera electric vehicle will generate initial interest right away, said automotive analyst Alexander Edwards of Strategic Vision, an international consulting firm based in San Diego.

"But the main thing we know about the mass majority of auto consumers is that they do not like compromises," Edwards said. "Nearly 90 percent of the new-vehicle-buying population is very open to green products, but if you ask them to give up a little power, a little convenience, diminished styling inside or out and an increased price, most will say, 'No, thank you.'"

But what about safety? Because it is a three-wheeler, it is not held to the same government crash standards as four-wheeled passenger vehicles. The spindly looking vehicle has a curb weight of less than 1,500 pounds, which would appear to be no match against a large four-wheel passenger vehicle.

"We will exceed the automobile standards probably by double for roof crush, door impact, frontal, side impact and seat-belt pull," said Brett Ellman, one of the composite engineers. His team is continuing with a series of tests for the materials. Eventually, engineers will perform crash tests with mannequins, he said.

Side-impact air bags are standard equipment and side-intrusion door beams are three times heavier than those used in passenger cars, Anthony said. In a 49 mph front-offset crash test, there was no intrusion of suspension components into the cabin, he said.

The broad spacing of two wheels in front, one in back has been proved to be a stable setup, as seen in high-mileage, motorcyclelike vehicles now available, such as the Can-Am Spyder.

"We know how to make a three-wheel vehicle really, really stable and really, really drivable," Anthony said.

People can have the Aptera in any color as long as it is white, which is good for its reflective qualities.

The interior is more Cessna than automotive, but the cabin is comfortable for two adults side by side. The area behind the front seats will accommodate a child seat or two seven-foot surfboards or about 15 bags of groceries.

The driver faces a digital dashboard, centered by three video screens that give a rearward 180-degree view. Traditional rearview mirrors would disturb aerodynamics and add weight.

Solar cells integrated with the roof augment the climate-control system, which will vent hot air from the cabin when the vehicle is parked.

Charging is by 110-volt household outlet. A full charge takes six to eight hours, but topping off the battery pack from a 40-mile commute could take two hours, Anthony said.

Vehicle development has moved quickly for Aptera, which was formed in 2003. The series of prototypes and manufacturing have cost \$5 million, which would be pocket change for the Detroit Three.

Initial sales will be only in California. As production increases, other markets will be added. Fambro hopes to have the initial orders filled by the third quarter of 2009 and eventually ramp up production to 10,000 vehicles a year. Fambro said he may hold off taking more orders until manufacturing can catch up with demand.

Beginning with three employees in 2003, the company now has 25, working in a 10,000-square-foot building in the flight path of Palomar Airport. Fambro expects to move the operation within two months to a nearby 100,000-square-foot building.

Aptera's space-age styling has already grabbed the eye of Hollywood. Videos circulating on the Internet have identified it on the set for the next "Star Trek" film, due out about the time the first Aptera will be delivered.

"I stumbled into this at the right time," Fambro said. "A lot of people have tried to do this, mostly unsuccessfully, and a lot of that had to do with the price of gasoline. People are just very aware and mindful of energy now than they ever have been."

[Modesto Bee Editorial, Tuesday, March 25, 2008](#)

Bring valley air board appointment process out into the open

Appointments to seats reserved for representatives of valley cities on the regional air district board are in a muddle after the group that has made selections in the past bowed out of the process. It's incumbent on all those involved to come up with a new method for filling the seats, and soon.

That shouldn't be hard. The California League of Cities is backing out of its arrangement to do the choosing under threat of a lawsuit. And though we've been mostly satisfied with the league's choices, there are better ways to make them.

The San Joaquin Valley Air Pollution Control District is unique among state air districts in using the league to make appointments. Other districts employ selection committees that already exist in every county to fill seats on a variety of boards and agencies. It shouldn't be too hard to come up with a mechanism for using such committees in the eight valley counties. And those committees are governed by the same open meeting laws and public access rules that apply to city councils and boards of supervisors -- restrictions that don't apply to the League of Cities.

The number of city representatives on the air board rose from one to three after passage of Senate Bill 719 last year. That law was passed in part because of concerns that an air board dominated by county supervisors -- one from each of the eight counties -- was too beholden to established interests and not aggressive enough in pursuing tough new regulations.

SB 719 also added two other seats, to be filled with a scientist and a medical expert appointed by the governor. Gov. Schwarzenegger has not made those appointments, which is another situation that needs rectifying soon. Adding those voices to the board is necessary to bring the public's voice more clearly into the air board's deliberations.

One of the city seats will become vacant next year. It's imperative that a new, transparent process for filling the positions be in place before then.

[Modesto Bee, Guest Commentary, Tuesday, March 25, 2008](#)

BEN LIEBERMAN: March: The cruelest month - for high gas prices

The bad news is that gasoline prices are at record levels. The worse news is that the pain at the pump will likely increase in the months ahead, thanks in part to our own government.

Until recently, we couldn't say that pump prices were at a record, because the inflation-adjusted levels reached a few times in 1979-1981 during the Iranian revolution and Iran-Iraq war were a bit higher. No more. The current \$3.27 per gallon national average is a clear record.

These prices are even scarier given the time of year. Thanks to a host of unnecessarily costly environmental regulations designed to fight summertime smog, prices will probably rise still more. The springtime switchover from winter to summer grades of fuel begins soon - a logistical burden that usually bumps up prices. Then, until September, refiners have to make the more expensive cleaner-burning blends. The fact that there are more than a dozen distinct blends and barely-adequate refinery capacity to make them doesn't help either.

And, while all of this is going on, gasoline demand picks up as we head into the Memorial Day through Labor Day vacation season. Bottom line: Don't be surprised if today's prices are the cheapest until the fall. The only way out would be a big dip in oil prices from the current sky-high levels.

Perhaps the worst news of all is that Washington continues to look for ways to "help." Thus far, help has come in the form of measures that have backfired and boosted prices, like the mandate that ethanol be added to the gas supply. Ethanol increases the cost of driving - which shouldn't really come as a surprise. After all, if it were cheaper, the government wouldn't have to mandate it in the first place. Plus, the diversion of corn from food to fuel use has raised the price of corn as well as many related items, like corn-fed meat and dairy. Ethanol is also heavily subsidized, to the tune of more than \$1 per gallon. This year, the law requires 9 billion gallons be used, rising to 36 billion by 2022. So we taxpayers are paying for the privilege of higher fuel and food costs, and these costs are headed higher, along with the mandate.

While Washington has fiddled with its ethanol mandate, little effort has been made to streamline or eliminate the regulatory measures that have exacerbated the seasonal spike. We don't know what Congress and the president may try to do in response to the latest price increase, but recent history suggests little reason to expect anything useful.

Over the longer term, the feds are no less of an impediment to affordable energy. Oil is currently above \$100 a barrel, compared to an average of \$20 per barrel during the 1990s. This is due, at least in part, to political turmoil among many major oil producers. Thus, it makes sense to fully utilize the petroleum resources here in the U.S., which could provide at least some relief in the years ahead once the additional oil starts coming online. But a host of restrictions keep significant amounts of domestic crude off limits, and the price run-ups over the past few years have yet to change that.

Bills have been introduced to repeal these impediments and open promising onshore areas such as Alaska's Arctic National Wildlife Refuge (ANWR). Other measures would make available some of the 85 percent of our territorial waters that are currently restricted. Now that improvements in drilling technology have greatly reduced the above-ground footprint (as well as the risk of spills), these efforts make sense even without high oil prices. But with them, they represent a no-brainer.

It may be too much to ask of our federal government that it create affordable energy solutions. But it is not too much to ask that it stop being a part of the problem?

Ben Lieberman is a senior policy analyst for energy and environment at The Heritage Foundation. Readers may write to him in care of The Heritage Foundation, 214 Massachusetts Avenue NE, Washington, D.C. 20002.

[Contra Costa Times editorial: Tuesday, March 25, 2008](#)

The city of Dublin should be commended for getting tougher with its second-hand smoking regulations last week.

Under the new rules, smoking will be prohibited inside homes that provide day care, adult services or health services — even when no patrons are there.

Children and the elderly should not be subjected to the particulates of cigarette smoke that lodge in floors, furniture, carpet, ventilation systems and walls.

City code already prohibits smoking in enclosed public places, businesses, restaurants and certain places of employment. But the law did not cover private residences licensed as day-care homes when they were not open for business.

State law, however, allowed the city to expand the rules. The City Council wisely took advantage of that.

Dublin police will enforce the ban if they receive complaints. A fine up to \$100 can be assessed for the first violation. The second violation within a year will carry a fine of \$200.

The fine for subsequent violations within the same year will be \$500. The new rule will apply to six private homes in the city where care centers operate.

We're told that Oakland, Emeryville and Pleasanton have similar rules. This is a common-sense ordinance. People who want to run such businesses out of their homes should have enough concern about their clients to enforce smoking bans on the premises. Cities without similar rules should follow Dublin's lead.

[Merced Sun-Star, Blog: Friday, March 21, 2008](#)

World Asthma Day poster contest wants Mercedian kids to draw and color

Kids, get out your pencils and crayons.

The Merced/Mariposa County Asthma Coalition's annual World Asthma Day poster contest is here again.

Merced County students from preschool to eighth grade can create poster-size artwork -- on paper no larger than 8 1/2 x 11 --- with a clean air or asthma theme.

Winners will have their posters printed in the Sun-Star on May 6, World Asthma Day.

I personally am looking forward to seeing what makes it into the newspaper. Quite a few months ago, the [San Joaquin Valley Air Pollution Control District](#) sponsored a contest for Valley elementary school children. The winning pictures made it into a 2008 calendar. I have that calendar hanging in my cubicle right now and have enjoyed the colorful drawings each month. I hope the art resulting from the poster contest is as fun as the art in this calendar.

Some idea suggestions for the poster contest include: "What do you think of asthma or air pollution?" "What things cause asthma?" and "What can you or your school do to help clean the air?"

The submission deadline is April 23. Mail the posters to the Merced Sun-Star, Poster Contest, 3033 North G St., Merced CA 95340. And, no, I don't have anything to do with the contest. I just like the student art. For more information, contact Mary-Michal Rawling at the Asthma Coalition at (209) 385-5490 or mrawling@gvhc.org.

[Patterson Irrigator, Letter to the Editor, Monday, March 24, 2008](#)

Supes out of touch with West Side

How can the Stanislaus County Board of Supervisors vote "yes" for West Park and say it's no big deal? We on the West Side consider lots of smog, traffic, dividing the town, loss of farmland and a water shortage to be a huge deal.

And what about people who work in the Bay Area but want to work here? Why don't they get a job in Modesto or Turlock? Do they think that West Park is going to pay more than other companies here in the valley? Well, they have another "think" coming. They won't be able to pay for their houses with those wages.

And where is Kamilos buying farmland to make up for the loss? All available land is farmed or built on already. Is he going to buy land in another state?

If there are six trains each day, with 80 containers on each train, that will mean there will be 480 trucks going over Highway 33 every day.

No smog? There won't be room for us anymore. And don't forget those workers.

Then again, nobody on the board of supervisors lives here, so what do they care? They only see dollar signs, and it's the wrong way.

Trudy de Groot, Patterson

[Fresno Bee Letter to the Editor Tues., March 25, 2008](#)

Get out of the cars

Increasing speed from 55 mph to 80 mph doubles fuel consumption! Bring back the 55 mph speed limit. Only allow small, four-cylinder engines in cars: 1.3 liter, 1.5 liter and 1.7 liter.

Get all air traffic and highway traffic onto highly fuel-efficient railroads. To hell with highways and freeways and airplanes.

Warren F. Hillman, Corcoran

[Note: The following clip in Spanish discusses EPA will strive to have stricter regulations on ozone in the country. For more information on this or other Spanish clips, contact Claudia Encinas at \(559\) 230-5851.](#)

Duplicaría la EPA en servicios de salud la inversión para controlar la contaminación del aire

Noticiero Latino,
Radio Bilingüe, Monday, March 24, 2008

La Agencia federal de Protección Ambiental (EPA, por sus siglas en inglés) duplicaría, en ahorros de servicios de salud nacionales, la inversión para financiar nuevos límites a la contaminación del aire con ozono.

Un experto del Instituto Tecnológico de Georgia, Michael Chang calculó que la EPA Invertiría como máximo ocho mil 500 millones de dólares anuales para restringir más el ozono en el país.

Los ahorros por servicios médicos a personas que sufrieran daños por esa contaminación se traducirían en hasta 19 mil 300 millones de dólares, dijo el experto.

Pero para cumplir las nuevas reglas, la industria tendría que hacer cambios tecnológicos y parte del gasto pasaría al público, dijo Chang.