

BUSINESS

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DOW 11,192.58 ▼ 90.52 | S&P 500 1,199.21 ▼ 14.33 | NASDAQ 2,518.21 ▼ 37.31 | GOLD \$1,365.40 ▼ 37.70 | OIL \$84.88 ▼ 2.93 | EURO \$1.369 ▲ 0.004 | U.S. T-NOTE (10-yr.) 2.75% ▲ 0.10



Photographs by MYUNG J. CHUN Los Angeles Times

DEMONSTRATION RUN: The E-Tracer at the Toyota Speedway in Irwindale. The vehicle can travel more than 200 miles on a single gallon of gas equivalent and reach a potential top speed of 200 mph.

REVIEW

Like a challenge? Try the E-Tracer

Learning to drive this two-wheel electric vehicle is no easy feat

Susan Carpenter

Some vehicles defy easy classification. Take the plug-in electric Peraves E-Tracer, headed for California roads next year. Balanced on two wheels and operated with a throttle, it's similar to a motorcycle. But it's also fully enclosed in a Kevlar fiberglass shell.

With two bucket seats, a floor-mounted brake, windows, even a windshield wiper, its interior feels more like a car — a toppled-over, traveling egg with windows all around, providing fantastic visibility.

It is, at once, an electric automobile and a motorcycle — and a prize-winner.

"It's not a hybrid. It's a hybrid, a snake, a serpent with two heads," said Roger Riedener, the Swiss chief executive who dreamed up the idea and who walked away with \$2.5 million in September for winning the 2010 Automotive X-Prize Alternative Class.

Beating 127 other X-Prize entries competing to build the world's most fuel-efficient vehicle, the E-Tracer can travel more than 200 miles on a single gallon of gas equivalent and



CAR-LIKE INTERIOR: The fully enclosed vehicle has two bucket seats, a floor-mounted brake, windows and even a windshield wiper.

reach a potential top speed of 200 mph.

It is the only X-Prize winner scheduled to go into production. About 100 of these "less than \$100,000" vehicles will be built each year, their shells assembled in Thailand and their drive-

trains installed in San Dimas at AC Propulsion, which developed its electric motor and battery system.

The target market for the E-Tracer: California, home to "real men and women" who like a challenge, said [See E-Tracer, B6]

MARKETS

Fears spark a cascade of selling

Commodities tumble as investors rush to take profits amid rumors China will try to slow its economy to tame inflation.

TOM PETRUNO

The fast-running bull market in commodities hit a wall Friday as prices plunged on fears that China will try to slow its economy to tame inflation.

Rumors of another Chinese interest-rate hike started a chain reaction of selling across financial markets worldwide — and gave some investors the excuse they needed to take profits after racking up heady gains in raw materials, stocks and bonds since late August.

The Reuters/Jefferies CRB index of 19 major commodities slumped 11.27 points, or 3.6%, to close at 303.60, its biggest one-day loss since April 2009.

The stock market also was broadly lower on economic jitters. The Dow Jones industrial average slid 90.52 points, or 0.8%, to 11,192.58, though most broader U.S. indexes fell more than 1%.

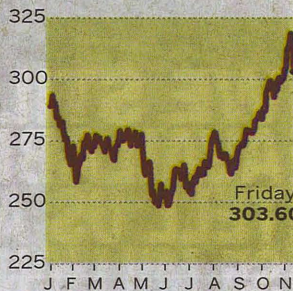
And in a surprise, U.S. Treasury bond yields rose, unnerving investors who had expected interest rates to be held down by the Federal Reserve's new program to buy massive amounts of government bonds over the next eight months.

The day's steep losses in crude oil, sugar, soybeans, gold and other commodities were painful for investors but will be welcomed by consumers, who face the prospect of higher prices. [See Markets, B5]

Sellers swarm

Commodity prices dived Friday on concerns that global demand could slow.

Reuters/Jefferies CRB commodity price index, daily closes*



*Index of 19 major commodities, such as oil, gold, copper and cotton. Source: Bloomberg

Los Angeles Times

For now, state debt isn't the problem

TOM PETRUNO

California took a record 100 days into the new fiscal year to nail down a budget, and that plan already is sporting a gaping hole.

Now, the state will go to investors to borrow \$14 billion in the next two weeks.

If you don't read much beyond those headlines, it's easy to send the outrage meter spinning well into the red zone. How can California, with such horrendous financial problems, dare to dig itself into a deeper debt chasm?

And why would investors be willing to fork over their money to a state that looks more fiscally dysfunctional than ever?

Yet the dots don't quite connect the way the outrage-prone might prefer. The borrowing spree that Treasurer Bill Lockyer is about to launch isn't about trying to paper over short-term budget troubles with long-term debt.

Rather, about \$10 billion of the borrowing is a short-term loan the state typically takes out at this time of year to tide it over, awaiting the bulk of tax revenue to arrive in winter and spring. That loan, though larger than usual this year because of the late budget, still must be repaid by next June 30, [See Petruno, B4]



COMPANY TOWN

Comcast's Burke taps NBC's next leaders

Robert Greenblatt is credited with giving Showtime new vigor. Ted Harbert runs Comcast's L.A.-based channels, such as E!

MEG JAMES

Comcast Corp.'s Steve Burke is putting the finishing touches on his management team to take over NBC Universal and has tapped two veteran programmers — Robert Greenblatt and Ted Harbert — to lead the troubled NBC broadcast network.

Greenblatt, 50, the recently departed head of programming at Showtime, is credited with turning

around the perennial also-ran by using a gallery of morally twisted characters in shows such as "Weeds" and "Dexter." He left the premium channel in July when his contract ended.

Harbert, who runs Comcast's Los Angeles-based channels including E!, is expected to be offered responsibility for the business side of the network, including advertising sales and affiliate relations, according to people familiar with the plan. Harbert, 55, was an ABC programming executive during the 1990s and ran NBC's television production studio for several years before joining Comcast in 2004.

Under Harbert, E! has bolstered its programming with the reality series "Keeping Up With the Kardashians." [See NBC, B4]

TECH TRENDS

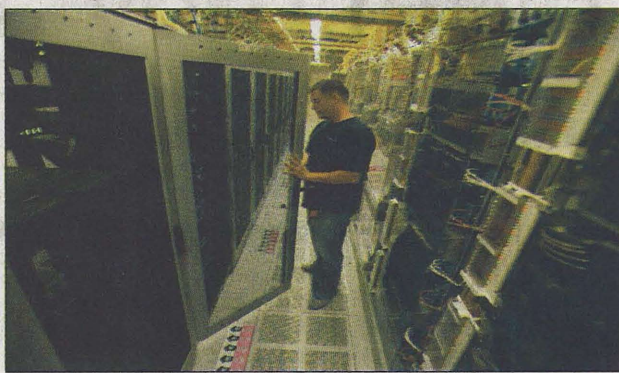
Faster wireless slow in coming

Building 4G phone networks is a huge and costly effort. Wide use is still a way off.

DAVID SARNO

If today's fastest smart phones deliver e-mails and Web pages with the speed of a thoroughbred racehorse, then the next generation of phones — now rolling onto the runway — may feel like jet planes.

Powered by souped-up 4G networks (that's fourth generation), new smart phones will be more like mobile entertainment centers, allowing users to watch live, high-definition TV broadcasts, download entire movies in seconds and make smooth, uninterrupted video phone calls from street corners and hilltops alike.



FRANCINE ORR Los Angeles Times

INNARDS: Verizon Wireless senior technician Jim Harper works at a switching center in Los Angeles.

But don't burst into song quite yet: For all their high-flying potential, 4G networks are still a long way from taking off.

All four major cellular providers have been touting the speed and possibility of

4G, but the number of consumers these embryonic networks now reach is limited, and only a few early handsets are on the market. It could be a year or more before the technology is widely [See Wireless, B3]

A thrilling combo of car, motorcycle

[E-Tracer, from B1] Riedener, 53. Recently, I was given the first media test drive of this intriguing, and daring, vehicle.

My having test-ridden almost 200 motorcycles and dozens of cars was a good baseline, but I wasn't sure it was adequate preparation for a vehicle whose stats were both impressive and terrifying. The E-Tracer weighs 1,260 pounds, about three times as much as an average motorcycle. Its wheelbase is 120 inches, more than twice as long as a Harley.

Because the vehicle was fully enclosed, there was no opportunity for me to put a foot down to catch my balance. Even if that were a possibility, extending a leg to catch such a heavy machine could easily snap a femur.

This vehicle has outriggers to balance the machine at low speeds. They allow the E-Tracer to stand up straight until it gets moving, but they have to be operated manually with a toggle switch inside the cockpit. When the outriggers are down, the E-Tracer is balanced on four wheels, so it handles more like a car with direct steering. Turn the handlebar right, move to the right.

But as soon as the outriggers are up, the vehicle becomes a motorcycle, which requires countersteering.

Before taking the controls myself, I hitched a ride as a passenger with Riedener, a motorcyclist, sports car driver and pilot who has spent the last 20 years flying electric airplanes. He pushed the driver's seat forward, and I hopped into the seat behind him. The E-Tracer has a gull-wing door

that opens up, rather than out, similar to the Mercedes-Benz SLS AMG.

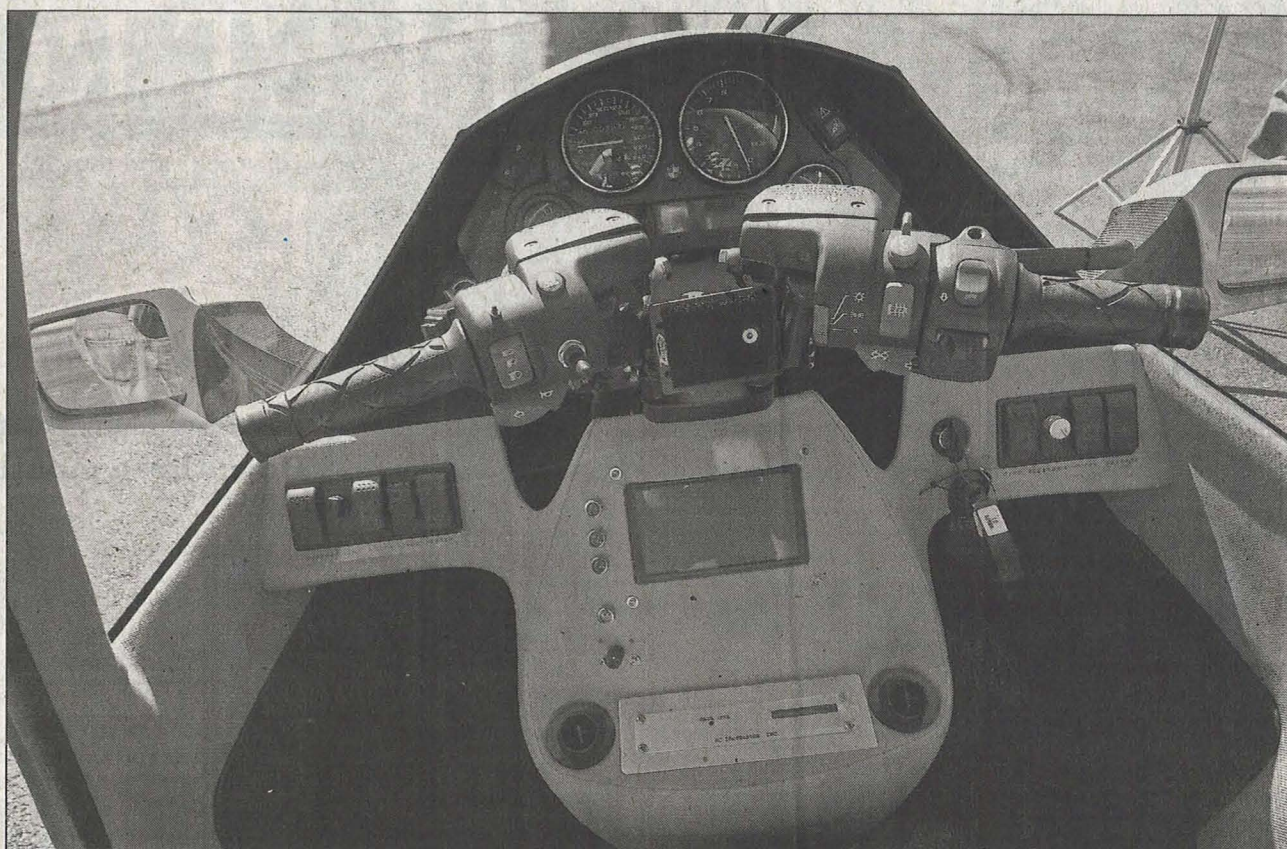
Hermetically sealed inside our bubble, Riedener twisted the grip, toggled the outriggers into the up position and sped out onto the track at Irwindale's Toyota Speedway.

The only sound was the whine of the straight-cut gearbox on this direct-drive machine that requires no gear shifting. Careening toward a corner at 100 mph, we were still achieving phenomenal fuel economy: about 100 mpg equivalent.

The E-Tracer can lean as far as 52 degrees — about as deep into a turn as a top-tier racer on a purpose-built superbike. Braking deep into the corner, with regenerative brakes that add power back into the batteries, Riedener canted us over maybe 30 degrees, allowing physics to yank us back upright with a flick of the wrist.

The E-Tracer has its origins in a vehicle that dates to the 1970s, when a Swiss Air pilot and Porsche enthusiast decided to create a sport-oriented machine that allowed him to split lanes on the autobahn and also stay protected from the rain. The result was something called the Eco Mobile, a vehicle that, in 2009, birthed the prototype E-Tracer.

The E-Tracer employs a 150-kilowatt-hour AC induction motor and 20-kilowatt-hour lithium-ion battery pack similar to the one licensed to Tesla Motors Inc. by the same electric drivetrain developer. Its maximum horsepower is a whopping 204, and it accelerates from 60 to 120 mph in less than three seconds — simi-



Photographs by MYUNG J. CHUN Los Angeles Times

PLUG-IN ELECTRIC: The E-Tracer employs a 20-kilowatt-hour lithium-ion battery pack similar to the one licensed to Tesla Motors by the same electric drivetrain developer.



SPEEDY: The vehicle's maximum horsepower is a whopping 204, and it accelerates from 60 to 120 mph in less than three seconds, similar to a Ferrari 458 Italia.

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"We're no greenies," Riedener said. "We made the electric version because it was faster than the [internal combustion] version.

"Just as an added value, we got this amazing mileage, but we were never targeting mileage. We were always tar-

geting raw speed," said Riedener, who says he will attempt to break the land-speed record for an electric, fully enclosed, production motorcycle with the E-Tracer next year.

Electric vehicles make maximum torque the instant the drivetrain is acti-

ated. The E-Tracer has double the torque of the BMW K1200, which is one of the most powerful motorcycle engines made by BMW.

Stepping into the cockpit to ride solo, I closed the door and strapped in. Making sure the drive switch was in the forward position, I rolled

on the throttle gaining speed, toggled the outriggers up — and promptly fell over, damaging my training wheels in the process. The bolt wasn't adequate to hold the training wheels in place, and there wasn't another one available, so my test was cut pitifully short.

Learning to drive the E-Tracer is no easy feat. According to Riedener, it can take 10 minutes, two hours or two days. Even the former Maserati test driver who now works for AC Propulsion dumped it on the first attempt.

In the short time I was given the E-Tracer, I wasn't able to master it. I managed to get it going, but only for a moment. It will take awhile before I can control and drive it properly. But I will.

Incredible fuel economy, speed, maneuverability, comfort. The E-Tracer has many perks. It just takes a hefty checkbook, nerves of steel and the balance of a Chinese acrobat to tap into it.

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