By PETER BLAIS

olf car makers have watched oil prices triple from roughly \$12 to \$34 a barrel over the past year, but so far have seen little shift away from gas-powered vehicles due to the higher prices.

"It has not had any impact so far. The golf cars we're building now are orders that have been in house for some time," said Ron Skenes, manager of communications and media relations with E-Z-GO. "Long term, we haven't seen any signs of an impact. When you consider that it takes about a quart of gas to run a golf car for 18 holes, even at today's gas prices, that's about 40 cents a round.

"Obviously, if the gasoline price continues to increase that could have an impact on people's decisions. But there are a lot of other factors to consider when changing from gas to electric cars."

Over the past 10 years, there has been a steady shift in the market away from gas and toward electric to the point where roughly 60 to 65 percent of golf cars at U.S. courses are electric and 35 to 40 percent gas, Skenes said. "We anticipate electric's lead will continue to get stronger," he added.

ClubCar spokesman Mark Burris said the company's electric cars far outsell gas models. "The 48-volt power-train system virtually eliminated the traditional reasons for using gas," Burris said. "People buy gas vehicles for one of three reasons. One, they always have bought them. Two, they don't have a storage facility for electric vehicles. Three, the hills on a golf course make one think gas is needed for the power.

Our 48-volt battery [is powerful enough that it] has eliminated the perceived need for the power from gasoline vehicles. There has been a steady 1- to 2-percent shift toward electric cars since 1995."

Asked if increased oil prices are changing the golf car marketplace, **Yamaha** Division Manager Mike Muetzel replied: "We haven't seen anything so far. And I don't anticipate that we will. Part of that is

# Golf car makers see minimal impact from increased oil prices

just the efficiency of the engines. The gas cars will go 40 to 45 rounds on a tank of gas.

"And the guys buying gas cars are mainly the Mom-and-Pops who keep them five, six, seven, eight years and maintain the trade-in value. Although they are number of recently built upscale, dailyfee courses, which prefer to offer their customers an electric vehicle. "New construction courses are probably 90 percent electric and 10 percent gas," he estimated.



The Sun Caddy system installed on this car reduces the frequency of golf car battery recharging.

watching the energy costs, the significant equity they can maintain by keeping the car longer won't go away.

"You look at guys like the Jemseks at Cog Hill in Chicago. He has 1,100 gas cars. Fuel prices could probably go to \$2 a gallon, and he won't vary what he's doing because he's going to run those cars for 10 years. He buys 100 cars a year and rotates them."

The overall shift away from gas and toward electric cars, Muetzel said, is less a matter of economics, or even air pollution concerns, than the growth in the

A secondary petroleum-related problem involves suppliers of materials to make golf car bodies. Most golf car bodies are made out of thermo-plastic materials that are petroleum-based, Muetzel explained. "We've been very conscious about locking in long-term deals on that stuff with our suppliers," he said. "Periodically we'll send out letters requesting a 5-percent price reduction because of our volume, which other large manufacturers do as a course of business. Sometimes they acquiesce, sometimes they can't do it."

#### UTILITY VEHICLES

The utility vehicle market, on the other hand, is still predominately gas, E-Z-GO's Skenes said. "It's a different application. They run pretty much all day long. And with the type of applications [power and range are more important] for utility vehicles, gas makes more sense."

Added Yamaha's Muetzel: "But we [utility vehicle manufacturers] are banking on that [a shift from gas to electric] happening very, very soon. It won't be due to petroleum pricing, but because of environmental concerns. The problem has been that utility vehicles used in high-stress situations, so far, have not been supported by the technology on the electric side. With the advent of 48-volt cars with more power, better reserves and greater hill-climbing capacity, that will lend itself to a new series of electric work vehicles.

"That's the big race. The industry is waking up to the fact that the industrial/ commercial market is far larger than anyone ever knew... ClubCar and E-Z-GO have a real good handle on the potential of that market. We're trying to get our arms around it. We think it's so significant that rather than developing a series of vehicles for that market, we are in dialogue with a number of prominent companies to step into that market via acquisition rather than product development. We're looking at a couple of companies that would make us a player in that market immediately. Right now we basically have one vehicle with a number of derivatives of that vehicle.'

### ALTERNATIVE POWER

E-Z-GO has experimented with prototype compressed natural gas- and liquid propane-powered vehicles, Skenes said.

"There has not been a tremendous demand from the market for anything other than what we are already providing," he said. "If the environment is the issue, then you'll see most courses just shifting to electric. An alternative fuel would have

Continued on next page

NEW TORO WORKMAN

BLOOMINGTON, Minn. — The new Workman 1100 and the Workman 2100 offer extraordinary traction and ride provided by a unique Active In-Frame suspension. This allows all vehicle tires to remain on the ground and to twist over rough terrain. Additional features on the Workman include corrosion-and dent-resistant hood and bed, multiple integrated storage areas, quiet 11- or 16-hp pedal start Briggs & Stratton Vanguard engines and an easily customizable bed. Floatation tires come standard on the Workman. For more information, contact 612-888-8801 or www.toro.com. (More new golf car and utility vehicle products on pages 40-41).

## Columbia acquires Legend Electric Vehicles' line



ACQUISITIONS

REEDSBURG, Wis. — Columbia Industrial/Commercial Vehicle Group, has acquired the specific assets and the product line of Legend Electric Vehicles of Redlands, Calif. The acquisition will increase Columbia's industrial and commercial product line. Legend manufactures a line of electric industrial and commercial vehicles ranging from a 12-volt single-person personnel carrier to 48-volt, 5000 -pound capacity, 75-inch deck-size flatbed burden carriers.

Of particular interest for increasing the Columbia industrial and commercial product line are Legend's flatbed "driver up front-over front wheels" configuration vehicle, and the popular Legend Chariot, a single-person/stand-up personnel carrier.

Columbia will be relocating the manufacturing, marketing and servicing of the Legend products to its existing Reedsburg facilities. This activity was completed in February, while insuring current needs for Columbia and Legend

production vehicles and service parts are addressed.

Responsibility for sales of Legend vehicles will be headquartered in Reedsburg. The Columbia sales staff and company sales offices in Anaheim, Calif., and Leesburg, Fla., will assume responsibility for field sales. No immediate changes are planned in either the Legend or Columbia dealer organizations. Both lines will be available to both dealer organizations.

