

Metallic Power receives additional financing

SAN DIEGO — Metallic Power, a developer of rapidly refuelable zinc/air fuel cells, has closed its second round of venture capital funding, with \$4 million in new investments and two new corporate investors.

Hydro-Québec Capitech and Minnesota Power join current investors Nth Power and Arete

Corp., each investing \$1 million in Metallic Power.

"Adding Hydro-Québec Capitech and Minnesota Power to our growing list of investors will give Metallic Power the resources it needs to take the technology to the next level," said Dr. Jeff Colborn, chief executive officer and president of Metallic Power.

"This support enables us to rapidly move our product development forward and prepare us for the testing of 50 customer-evaluation units at the end of this year."

Said Denis Lévesque, director of investments for Capitech: "Metallic Power's zinc/air fuel cell technology is in line with Capitech's mission of investing in

enterprises offering energy-related technologies and allowing our shareholder, Hydro-Québec, one of the world's largest electric utilities, to become commercially more efficient."

Metallic Power's zinc/air fuel cell system consists of zinc air fuel cells and a zinc recycling unit. The fuel cell generates electricity when it combines zinc pellets with oxygen from the air

in the presence of an electrolyte, forming zinc oxide, a safe white powder commonly used in skin creams and sun block. The recycling unit uses wall electricity to convert the zinc oxide back into fresh zinc, which is then recombined with the electrolyte to be reused as fresh fuel. In a backup power application, the two components can be packaged together to form one complete power and regeneration system.

According to Metallic Power, the zinc/air fuel cell system can reduce operating costs dramatically.

Alternative fuels

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to be economically competitive with the systems out there."

ClubCar has several alternative fuel-powered golf cars and utility vehicles on the drawing board, but nothing ready to hit the market, Burris said. The company's Carryall II electric is a popular model, but gas-powered utility vehicle sales far outpace electrics, he added.

Yamaha has looked at natural gas conversions and solar energy.

"But the technology race, at least from Yamaha's perspective, is geared around radically new battery technology," said Muetzel, adding that the company is considering joint ventures with other companies in the battery area.

"We're looking at batteries that are lighter, smaller and will go much longer. The risk is that the companies we're talking with are small, venture capital start-up companies. In the next six months we'll have to decide whether we want to put our eggs in that basket or not."

Products that can help make electric vehicles more efficient are starting to show some promise.

PowerLight Corp. of Berkley, Calif., is moving ahead with its Sun Caddy solar-powered golf car system. The system uses high-efficiency solar cells similar to those used in satellites. The panels are fitted to the golf car roof and help reduce the amount of time and money cars spend recharging in the maintenance facility. Existing electric-powered golf cars can be retrofitted to use the Sun Caddy system, which was on display at the recent International Golf Course Conference and Show in New Orleans.

"We had people lined up four deep at our booth during the entire show," said PowerLight President Daniel Shugar.

Many of the golf car manufacturers have been interested in the product, Shugar said. Several courses have signed contracts to convert existing fleets, including Mauna Lani Resort in Hawaii along with pending deals in Hawaii, California, Arizona and Florida.



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