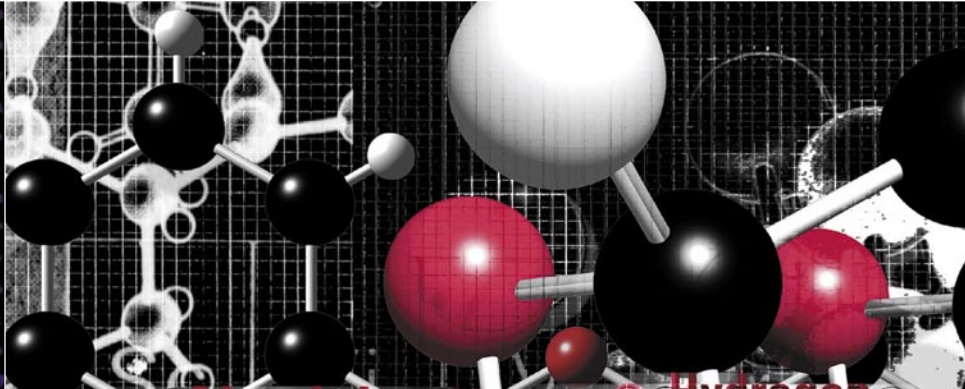




ADVANCED ENERGIES

ONE STEP AHEAD OF TOMORROW



PRESIDENT BUSH REVIEWS ACTIVITIES AT ECD OVONICS

ECD Ovonic's activities have generated interest at the highest levels of government, beginning with a visit from the Secretary of Energy as part of the agency's "Energizing America for Energy Security" tour in 2005. Then, the President paid a visit to United Solar Ovonic this year.

ACTIVITIES HAVE ACCELERATED at Energy Conversion Devices (ECD Ovonic) on multiple fronts, from hydrogen storage and fuel cell development to photovoltaic (PV) and thin-film semiconductor memory technology. The discoveries that ECD Ovonic founder Stanford Ovshinsky made in amorphous and disordered materials decades ago, which have been nurtured to market by diverse ECD Ovonic subsidiaries, are finding increasing applications in the marketplace.

This has not gone unnoticed. Global mutual fund Portfolio 21 placed Energy Conversion Devices (NASDAQ:ENER) at the top of its list of Top 10 financial performers among environmentally sustainable companies. According to Portfolio 21, investors need to pay attention to ecological trends and how they affect the bottom line, and points out that companies already addressing the risks and opportunities presented by climate change are enjoying a big head start.

ECD Ovonic's activities have also generated interest at the highest levels of government. Department of Energy Secretary Samuel Bodman visited the company as part of the agency's "Energizing America for Energy Security" tour last year. Secretary Bodman participated in a groundbreaking ceremony for a new PV facility that will manufacture additional solar energy product for United Solar Ovonic, a wholly owned subsidiary of ECD Ovonic. United Solar Ovonic is currently producing at its full-rated capacity.

Recently, President Bush visited the Auburn Hills, Michigan production facility of United Solar Ovonic, which uses the world's largest machine for the production of thin-film amorphous silicon alloy solar cells. Approximately a football field long, the machine works similar to a newspaper press in the way it efficiently produces flexible and lightweight PV material on rolls of stainless steel substrate.



ECD Ovonic Chairman and CEO Robert Stempel with President George W. Bush

Why such attention from Washington? Much of ECD Ovonic's focus is on products that enhance energy efficiency and environmental compatibility – two important touchstones in an age where energy security and air quality challenges loom large on the nation's agenda. Answers being developed at ECD Ovonic are clearly good for the company and the country as well.

TAKING ON THE HYDROGEN STORAGE CHALLENGE



THE ROAD TO THE HYDROGEN HIGHWAY is filled with technological challenges that will be overcome, one by one. Already, hydrogen fuel cells that once filled an entire commercial step van are being packaged within the confines of small cars. Fuel cell stacks that experienced freezing issues are operating in sub-zero temperatures. Hydrogen internal combustion vehicles that once suffered pre-detonation – backfiring – are running smoothly and efficiently.

Along the way, on-board storage has improved to the point where many hydrogen vehicles carry enough fuel to drive 100 miles or more. That's quite an improvement from the early years of hydrogen vehicles that had trouble carrying

number of cylinders needed to provide decent driving range.

It's clear that the answer is not to continue adding more cylinders, but to make cylinders that are used more efficient carriers of hydrogen fuel. Some in the industry are approaching this by increasing the pressure under which hydrogen is stored, doubling storage vessel pressure from the current industry-standard of 5,000 psi to 10,000 psi. However, this strategy does nothing to alleviate the concerns of those already wary of high-pressure gaseous storage on-board vehicles. It also brings with it the increased cost of requiring industry-wide changes to higher pressure fuel dispensing equipment, lines, fittings, and other components.

OVONIC® SOLID METAL HYDROGEN STORAGE TECHNOLOGY ENABLES HYDROGEN TO BE ABSORBED BY A POWDERED METAL ALLOY INSIDE A SPECIALLY DESIGNED STORAGE CYLINDER. THIS ALLOWS STORING HYDROGEN AT MUCH LOWER PRESSURES THAN THOSE TYPICALLY USED IN HYDROGEN VEHICLE APPLICATIONS.

enough fuel to drive 50 miles – about the same distance a gasoline vehicle can drive once a low fuel warning light is triggered. But while 100 or 150 miles may represent progress, this driving range is far too limiting and continues to represent a major challenge to those developing hydrogen and fuel cell vehicles.

The dilemma resides in the characteristics of hydrogen, a gaseous fuel, which must be stored under pressure in specially designed cylinders. Traditionally, the higher the pressure under which a fuel is stored, the greater volume of fuel carried on-board and the farther a vehicle can drive. These cylinders are bulky by nature, and while composite cylinders are substantially lighter than steel cylinders of the past, weight and bulk remain challenging issues. Simply, it's tough to find enough room within a vehicle to integrate the

Energy Conversion Devices (ECD Ovonic) knows there's a better way. The company's answer is Ovonic® solid metal hydrogen storage, a proprietary technology that allows hydrogen to be stored at much lower pressures than the 5,000 to 10,000 psi typically used in hydrogen vehicle applications. Additionally, since the Ovonic® system causes gaseous hydrogen to be absorbed by a powdered metal alloy inside the specially designed storage cylinder, vehicles can carry on-board hydrogen in a safer and more benign state. Yet another plus: Fuel cylinders incorporating metal hydrides can store a greater volume of hydrogen than identical cylinders without hydrides, which translates to greater driving range.

In an Ovonic® metal hydride storage system, heat needs to be removed during refueling to facilitate absorption, causing hydrogen to bond at the

atomic level with the powdered metal alloy inside the tank. Waste heat from the engine cooling loop is captured to release hydrogen into the fuel system as needed while driving.

This technology is being showcased in an innovative hydrogen vehicle from ECD Ovonic that's undergoing fleet testing at the South Coast Air Quality Management District (AQMD) in Southern California. A project of Ovonic Hydrogen Systems LLC, a subsidiary of ECD Ovonic, the advanced vehicle is a high-profile test bed designed to prove that hydrogen hybrids can be practical in daily life. Refueling during fleet testing is taking place at a hydrogen station at the South Coast AQMD headquarters, which has been specially modified to refuel the vehicle at a low 1,500 psi.

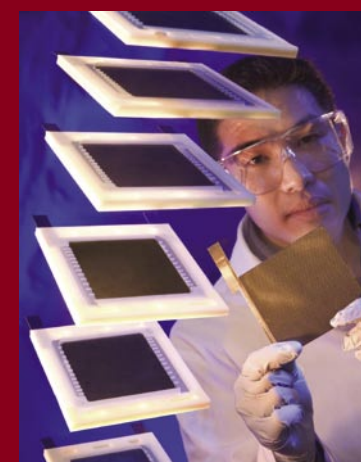
Additional ECD Ovonic hydrogen hybrids are expected to join the fleet in the coming months, and one is already in service at ECD Ovonic's headquarters in Rochester Hills, Michigan. These hydrogen hybrids have been turbocharged to compensate for hydrogen's lower energy density and enhance overall performance and drivability. They are proving the functionality of Ovonic® metal hydride storage while also bringing a nearly 200 mile range to these hydrogen vehicles.

"That's substantially greater range than most hydrogen vehicles today, and an important milestone toward making hydrogen vehicles a practical alternative for the highway," says Robert Stempel, chairman and CEO of ECD Ovonic. "Our goal is to apply the diverse technologies based on ECD Ovonic's proprietary work to make advanced hybrid, hydrogen, and fuel cell vehicles competitive in the marketplace."

Clearly, this hydrogen hybrid vehicle is a great example of that evolutionary process and represents a solid step forward in the drive to making the hydrogen highway a reality.

AN EYE ON THE AFFORDABLE FUEL CELL

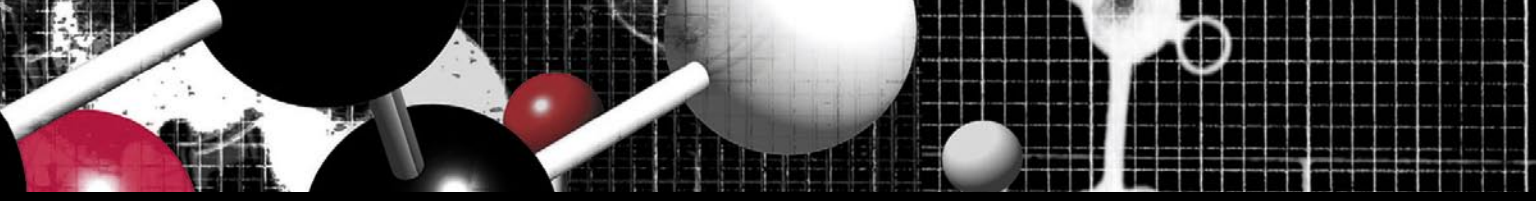
WHEN IS A FUEL CELL more than a fuel cell? It seems an odd question, but the answer is rooted in the common perceptions that assume a fuel cell must be hot, like those employing solid oxide technology, or not, like those using a proton exchange membrane. Plus, a fuel cell requires a constant source of fuel to operate. Energy Conversion Devices (ECD Ovonic) has a different and innovative approach that provides yet another definition. The company's Ovonic Metal Hydride Fuel Cell combines all the efficiency and environmental benefits of a fuel cell with the advantages of an advanced nickel-metal-hydride battery.



A technology under development at ECD Ovonic subsidiary Ovonic Fuel Cell Company LLC, the Ovonic Metal Hydride Fuel Cell employs a fundamentally new approach that enables a fuel cell to store electrical energy in the fuel cell stack. Since it can store and recapture energy in the stack – including energy produced through regenerative braking – there is the potential to displace the auxiliary battery from a fuel cell system, reducing complexity and cost. Among the Ovonic® fuel cell's other advantages are excellent low temperature performance and fuel cell start-up within microseconds, important performance features in the world of fuel cell commercialization.

Cost is crucial to the long-term success of fuel cells, and indeed to the use of renewable hydrogen as a primary fuel used to generate power for our homes, cars, and many aspects of life. Ovonic® fuel cell technology addresses this with the use of low-cost Ovonic metal hydride materials rather than prohibitively expensive catalysts like platinum and other precious metals that are traditionally used. In the Ovonic Metal Hydride Fuel Cell, the anode's active material is low cost and robust, and the materials can be easily produced by proven low-cost production methods.

There's widespread interest in this technology. The Ovonic Metal Hydride Fuel Cell's inherent advantages make it attractive for transportation, portable electronics, stationary power, and military applications. The Michigan Public Service Commission, which sees the potential for back-up power, has provided funding for development of a prototype fuel cell system for uninterrupted power supply and emergency power supply applications. Work on this nine month, \$400,000 project will enable Ovonic Fuel Cell Company to provide prototype fuel cell products to a variety of customers.



ECD POWER PLAYS

►►► BREAKING NEW GROUND

United Solar Ovonic LLC, a subsidiary of Energy Conversion Devices, Inc., will expand its solar module manufacturing capacity to 300 megawatts (MW) by the end of the decade. This includes the addition of a just-announced third solar module manufacturing facility in Greenville, Michigan, with two 25MW solar manufacturing lines under one roof. Last year, United Solar Ovonic broke ground on a second 25MW, thin-film triple-junction solar module manufacturing facility in Auburn Hills, Michigan. The existing United Solar Ovonic 25MW module manufacturing plant is the largest thin-film photovoltaic module manufacturing plant in the world.

►►► COBASYS IN SATURN HYBRID

GM's new 2007 Saturn Vue Green Line hybrid SUV will use NiMHax[®] nickel-metal hydride (NiMH) batteries sourced from Cobasys LLC, a joint venture between Chevron Technology Ventures LLC and ECD Ovonic's Ovonic Battery Company, Inc. This is the first automotive production program utilizing a domestically-produced NiMH battery for a gasoline electric hybrid production vehicle. The NiMHax 36 volt systems will be built at Cobasys' manufacturing facility in Springboro, Ohio. Cobasys advanced NiMH battery systems are used in transportation, back-up power supply, telecom, and distributed power generation applications.

►►► SOLAR POWERED COMMUNITY

Over 7,000 homes being constructed and renovated for use by U.S. military families on the island of Oahu, Hawaii, will benefit from solar energy by United Solar Ovonic LLC. Builder Actus Lend Lease has contracted for seven megawatts of UNI-SOLAR[®] photovoltaic product for a solar network that will provide 30 percent of the community's total power needs. According to Actus, no other solar-powered residential community comes close to the size and scope of Army Hawaii.

SAMSUNG LICENSES OVONYX TECHNOLOGY

IN THE EVER-CHANGING WORLD of consumer electronics, creating smaller, more powerful, and better performing devices occurs as a matter of course. With more features and functionality comes the need for better memory, a challenge that continues to tax the capabilities of existing technologies. This will only become more pronounced in the future.

Energy Conversion Devices (ECD Ovonic) has met with considerable success in this area through its joint venture, Ovonyx, Inc., and the company's Ovonic Universal Memory (OUM) technology. Invented by ECD Ovonic's president and chief scientist Stanford Ovshinsky, this reversible phase-change memory technology is suitable for wide-ranging applications. It has already found worldwide use in rewritable DVDs and CDs. OUM thin-film semiconductor technology is also a top contender to replace Flash Read-Only Memory (ROM) and Dynamic Random Access Memory (DRAM), due to its manufacturing advantages and quick write and erase speeds. Plus, it has applicability for diverse embedded applications that place programs into non-volatile memory.

This technology has attracted investment from one of the industry's leading chip makers and licensing agreements from major manufacturers of electronics products. Interest was recently underscored through a long-term license agreement for OUM technology with Samsung Electronics Co., Ltd., a prolific producer of cellphones, digital televisions, memory chips, and wide-ranging electronics products. Along with Samsung, Ovonyx is pursuing commercialization of its memory systems through joint development programs with its other licensees.



ECONOMIST AWARD TO STAN OVSHINSKY



STANFORD OVSHINSKY, ECD OVONICS FOUNDER, president, and chief scientist, has been recognized by The Economist with its 2005 Innovation Award for Energy and the Environment. The Economist's Innovation Award recognizes seven leaders and innovators worldwide for transforming the businesses, industries, and markets in which they work. Ovshinsky was honored for his pioneering work in nickel-metal-hydride batteries, an enabling technology for battery electric, hybrid, and fuel cell vehicles.

Ovshinsky pioneered the fundamentally new science of amorphous and disordered materials early in his career, and in 1960 established ECD Ovonic with his scientist wife, Iris, to solve fundamental problems using technologies based on his discoveries. The company's work has brought about such important and diverse technologies as Ovonic nickel-metal hydride batteries, thin-film photovoltaics, optical media and electronic memories, solid metal hydrogen storage, and the Ovonic metal hydride fuel cell.

ADDITIONAL INFORMATION ON ENERGY CONVERSION DEVICES (NASDAQ:ENER) ACTIVITIES AND PRODUCTS IS AVAILABLE AT WWW.OVONIC.COM.

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