

**Fox Valley Electric Auto Association
1522 Clinton Place
River Forest, IL 60305-1208**

Address Correction Requested

NEXT MEETING: Friday, July 17 at 7:30 PM in Room K-161 at The College of Dupage SW Corner of 22nd Street & Lambert Road in Glen Ellen.

DISCUSSION TOPICS - 1. Offer to donate pickup truck 2. Offer to donate Fiat 3 "Ask The Fox" discussion of battery chargers and their application..

MEMBERSHIP INFORMATION

Any person interested in electric cars is welcome to join the FVEAA. The cost for a full year's dues is \$20 which will entitle the member to receive our monthly Newsletter that contains useful information about electric car components, construction, policies and events. Dues for new members joining in July will be \$ 8.

To obtain information about the FVEAA, you may contact either President Woods or Vice President Shafer:

President - Ken Woods
1264 Harvest Court
Naperville, IL 60564-8956
(630) 420-1118
E-mail Casa Zeus2@aol.com

Vice President & Editor - Bill Shafer
1522 Clinton Place
River Forest, IL 60305-1208
(708) 771-5202
E-mail electric_bill@compuserve.com

July, 1998 PRESSEZ

Ken's usual monthly contribution to the Newsletter was unavailable by copy deadline so this is a substitute from the VEEP:

A decision about the donation of a 1991 Ford Ranger remains to be settled. This will be the first item discussed.

Ken received an offer from (former) Member Helenowska to donate a Fiat to the Club. This is a Stockberger car that has solar panels added on the roof. The owner has two EV's and will keep the Jet Industries van. We will consider this offer that is contingent on someone wanting the car.

After the break, Member Shafer will lead a forum about battery charger design and application. This has been a particularly vexing problem.

BILL :-)

MINUTES OF JUNE 98 MEETING

Not Available

RECENT ARTICLES ABOUT EV's

Many articles this month were rehashes of stories that have previously appeared and reported in earlier FVEAA Newsletters. The source for articles is frequently derived from manufacturer's press releases. Below is a listing of these reread articles for reference.

RETREAD ARTICLES

Toyota Prius. Automobile News 6/98.

Honda EV Plus. Chicago Tribune 6/14/98. Chicago Sun-Times 5/17/98. Chicago Tribune. Section 7, Page 3 (Date unknown)

Panoz Hybrid for LeMans Race. Sun Publications 5/24/98

A new Model E - for efficient. Chicago Tribune 6/27/98. The Future Car Challenge

NEW ARTICLES

Chrysler will start electric van production. Chicago Tribune 6/21/98. EPIC, a new electric minivan, will be built at the Windsor, Ontario plant beginning in October. They plan to build 2000 vehicles for sale in California and or New York next year.

Australia's Solar Sailor. MIT Technology Review, July/August, 1998 Pages 55-58. This is a story about the innovative solar-powered boat developed and exhibited during the Second International Solar and Advanced Technology Boat Race in Canberra. The *Marjorie K* is a 7-meter catamaran that won the \$ 10,000 most-innovative prize at the event. Waterproof solar cells are mounted on two lightweight moveable wings that can be adjusted from horizontal to vertical. "The moveable wing design allows you to do two things simultaneously; take advantage of the wind, and get the absolute best alignment of the panels to the sun", noted race judge David Gaul.

The catamaran was conceived by Australian physician Robert Dane in the coastal village of Ulladulla, 150 miles south of Sydney. The concept may be used as harbor ferries during the Sydney Olympic Games.

Unleashing electric cars was the headline on an article in the 6/20/98 issue of the **MIT Spectrum**. Four MIT professors have designed a battery made of lithium, aluminum, and other materials. It has a greater energy storage ability than traditional batteries. The largest component is a flexible solid allowing the battery to fit in unconventional places.

RECENT ARTICLES ABOUT EV's - Concluded

Plastic batteries are charged up and waiting to go. MIT Technology Review July/August 1998, pages 60-66. Two Johns-Hopkins University scientists believe they are close to devising a satisfactory plastic battery. They have produced a prototype unit the shape of a business card that is thin and flexible. Their invention was named by Popular Science as "Invention of the Year" in 1997. It prompted numerous visits to their laboratory.

The battery was developed from chemist Alan MacDarimid's 1970 discovery that he could make the polymer polyacetylene into an electrical conductor by "doping" it with the right ingredients. The Johns-Hopkins battery is composed of a base sheet of Teflon containing a carbon current collector. The next sheet is a poly 3,4,5 TFPT (polypyrrole) anode. This is followed by a polymer gel electrolyte. Then comes a poly 3,4,5 DEPT cathode. The last layer is a Teflon sheet with a carbon collector.

The battery requires additional development for commercialization. More funding is needed to proceed with development, but potential financial backers want additional evidence the prototype can be scaled up before they agree to participate.

Fuel derived from sugar discovered, scientists say. Reuters 6/26/96. An easy way to produce hydrogen from sugar has been discovered by British and US scientists. It utilizes enzymes from bacteria that live near hot, underwater vents. These convert glucose into hydrogen and water. The findings will be published in the July issue of the journal, *Nature Biotechnology*.

Weighty Issues. Naperville Sun 6/7/98. This article describes Ford Motor's work to reduce the weight of its P-2000 vehicle. The goal is to reduce car weight by 30%. Fuel use can be reduced by 10% with a 10-15% cut in weight. There were 250 ideas submitted for evaluation. Aluminum and magnesium parts are prominent candidates

Halfway to Hypercars. Rocky Mountain Institute (RMI) Newsletter, Spring 1998. In the 1970's Institute Chief Amory Lovins pointed out the importance of decreasing automobile fuel consumption. He labeled these vehicles as *Hypercars*. In this article RMI noted that prototype cars at this year's auto shows have adopted the concept and are expected to get 60-80 miles per gallon. The keys to this achievement are weight reduction and decoupling the engine from the wheels. Hybrids smooth the energy flow by using small, high-power electrical storage devices and small engines run at their most-efficient operating point.

The reasons for interest in hybrids include Global warming, the Kyoto agreement to reward energy reductions, Gulf jitters, choking smog, high gasoline prices, a growing backlash against low-mileage sport-utility vehicles, and a fear that a competitor may do it first. So far Toyota has led the pack with its *Prius*. They believe that hybrids will capture one-third of the world market by 2005.

You can get more information about RMI's ideas from their web page: <http://www.rmi.org>

FROM OTHER EV NEWSLETTERS

CURRENT EVENTS, the publication of the Electric Auto Association, devoted their March/April issue to electric auto racing. Included were reports on APS competitions; the Stock Electric Final, the High School PitCrew Event, The Saturday Night Drags, The High School Main Events, and achievements of the all-girl team that built Highland Thunder. The issue also has listings for fifty two EAA Chapters in nineteen states.

EEVC, the Eastern Club in Valley Forge, PA featured the Cinnamonson High School participation in the Tour de Sol. Their car placed second out of ten participants in the commuter category. The issue also notes that Maxwell Technologies has received a \$700,000 order from Honda Motor Co for PowerCache ultracapacitors. Honda Motors will also begin leasing the EV Plus in New York.

Future Drive, in their Spring, 1998 issue of Argonne Lab's publication, had articles describing the latest designs for the PNGV 1998 competition from University of California- Davis and the University of Wisconsin - Madison. Competition dates are June 3-10.

The Davis car, Joule, was the 1997 competition winner. The weight of this year's car is 600 pound less than last years by use of an all-aluminium chassis. It will also have a new 18 kwh NiMH battery. The 3-cylinder, 660 cc engine can produce 40 horsepower at peak but will run at only 12-14 hp. The powertrain is a CVT, computer-controlled parallel hybrid.

The Wisconsin entry is an aluminum-intensive Mercury Sable powered by a 1.8-liter, 4-cylinder prototype direct-injection engine that will be used on Ford's European Mondeo.

VEVA, the always-interesting group from Vancouver, in their June Newsletter featured coverage of their 3d annual show-and-ride event. Present were their Detroit Electric, a Porsche 914 conversion, a Geo Metro conversion, a Grumman postal van, a converted Ford Festiva, an upgraded Electra 007, a Mercury Lynx, a Ford Aspire conversion, Electrathon vehicles, a recumbent bike, an electric tractor a motorcycle, and a *very-very* fast go-cart. Wilde Evolutions also came in from out of town with their Land Rover and Yellow Roadster. Quite a variety!

The issue also reports that Dennis Berube ran the 1/4-mile drag event in Phoenix in 10.48 seconds, 117.8 mph. He was the top eliminator, winning the \$ 1000 purse, beating the usual piston-engine dragsters who complained about "unfair competition".