

FOX VALLEY ELECTRIC AUTO ASSOCIATION NEWSLETTER FOR MAY, 2001

NEXT MEETING: SATURDAY, MAY 19 at 9 AM in the Triton INDUSTRIAL CAREERS BUILDING, (East Campus), Room 108

DISCUSSION TOPICS: 1. Starting the Triton Project 2. EV conversions available for sale 3. Exhibit Opportunities

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 members to receive our monthly Newsletter that contains useful information about electric car conversions, construction, news, policies, and events. Membership is not required to attend our meetings. Dues for NEW members joining in May will be \$ 12.

To obtain info about the FVEAA you may contact either Past-President Ken Woods or President Shafer

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PRESEZ

Note the changes in meeting day and time. Our next meeting will be on the day the Triton Project starts. Our May meeting will begin at 9 AM, one hour ahead of the Project starting time. The change was approved by the membership at the last meeting. It wasn't likely that members would attend a meeting on our usual Friday night and come back the next day to participate in the Project work. The change should eliminate the Friday evening traffic congestion experienced by members.

The Triton Project is now on-track. Students are being recruited, press releases issued. Ray Oviyach is ordering the shop manuals so they will be available at the start of the Project. Triton has been furnished with specifications covering the motor, adapter plate, coupling and motor balancing. These are required early in the conversion sequence. See the article about the Project in this Newsletter.

There are three opportunities to acquire an electric vehicle; 1. Member Steve Leisner is selling his 1982 "VoltsRabbit", 2. Ken Meyer's 1992 Festiva is part of Ken's estate, 3. The shell being used for Paul Harris' Mazda RX-7 is available. Details on these may be found in an article in this Newsletter.

Put **July 14-15** on your calendar. These are the dates for this year's American Solar Challenge that will start July 15th at the Museum of Science and Industry. Details are covered in this issue.

Gasoline prices are already at \$2/gallon. This should encourage interest in EV conversions. Do you have ideas on how the FVEAA should exploit this development?

BILL

MINUTES OF THE APRIL, 2001 MEETING

The meeting at Triton was called to order by President Shafer at 7:44 PM. Eleven members and one guest attended. Minutes for the March meeting were approved as published. Treasurer Corel reported no change in the Saving's Account and \$ 2,833.17 in the checking account. His report was accepted.

The status of the Triton Project was discussed. The FVEAA has been given a start date of May 19th. Apparently Triton Board approval is still pending, there has been no student recruitment or press releases about the undertaking, and there is a question about the car title status. These subjects were discussed. FVEAA members reaffirmed our commitment to see the project completion. President Shafer was authorized to send a letter to Triton outlining the problems that jeopardizes the start date.

The discussion about the car title produced several suggestions. This is Triton's problem that can be dealt with at the end of the Project and will not affect the conversion.

Net Gain is continuing to receive favorable publicity for *Bad Amplitude*. They were awarded another first-place trophy during a car exhibit. The vehicle is getting a rebuild and modifications in preparation for the coming racing season.

There are three events at which the FVEAA will have opportunities to exhibit converted cars. President Shafer will have his Mazda RX-7 at Morton College's Automotive Technology Educational Jamboree on Friday, May 11th. The following day is the second annual Alternative Energy Fair at the Electrical Workers Training Facility in Alsip. Anyone wishing to bring their car to the event should contact Ken Woods, a member of the Illinois Solar Energy Association, an event sponsor.

The **BIG EVENT** will be on July 14-15 at Chicago's Museum of Science & Industry. This year's American Solar Challenge will be run on Route 66 from Chicago to Los Angeles. Net Gain has been invited to exhibit *Bad Amplitude*. President Shafer will ask about exhibiting FVEAA conversions.

There was a discussion of EV conversions in progress and cars available for sale. Paul Harris has decided to install the components already fabricated in a Mazda RX-7 shell now owned by Net Gain. His car requires extensive, and expensive, body work. His shell is available to someone who can do the body work.

Two members are selling their electric cars, Steve Leisner his "VoltsRabbit" and Ken Myer's 90% completed Ford Festiva.

Member Ted Lowe obtained information on licensing an electric vehicle in Illinois. His report will be included in the May Newsletter.

President Shafer read an article by Sun Times Columnist Michael Sneed about a Toyota *PRIUS* "electric" car. He read his reply correcting her statement that it was an electric car.

Member Ray DeBoth gave a demonstration of his patented electroluminiscent crystals that glow when excited by a small ultraviolet light source.

The meeting was adjourned at 10:32 PM

Submitted by Secretary Dick Ness

GETTING ELECTRIC VEHICLE LICENSE PLATES IN ILLINOIS

By FVEAA Member Ted Lowe

I found information about how to register an EV in Illinois from the Secretary of State. I called (212) 782-2475. I talked with Dwayne in the Non-Standard Plate Department. I was informed an Electric Vehicle plate cost is \$ 35 for two years. In December of each odd year the plate expires and a renewal sticker is issued to those applying.

To request a plate, fill out the standard license request form, available at all Secretary of State offices. Mark the plate type as **ELECTRIC**. You must indicate whether the vehicle's maximum operating speed is over or under 45 mph (45 mph is the minimum legal speed on expressways).

A vehicle with top speed over 45 mph will be issued a plate reading **A EL XXX**. The plate for those below this speed will read **EL XXX**. The number assigned will be the next number in sequence, however you may request a number or ask for the lowest-available number.

Registering an EV is \$ 17.50/year versus \$ 78 for a standard plate, a \$ 60.50 annual savings.

THE ILLINOIS ALTERNATIVE FUELS REBATE PROGRAM

The Rebate was adopted by the Illinois Legislature in 1998. Its purpose was to improve the air quality in the Chicago Metropolitan Region. The program provides a rebate of 80% of the **additional** cost for a vehicle using a domestic renewable fuel, compared with the cost for a comparable gasoline-fueled vehicle. The usual fuels are natural gas, ethanol or LPG. In the case of EV conversions the rebate is equal to 80% of the conversion cost. There is a \$ 4000 Rebate cap.

Increasing the License Plate Fee for fleet owned vehicles in the affected area funds the Program. The Statutes require that vehicle conversions must be done within the State. This has been interpreted that if you buy and out-of-state EV it must be first sold to an automobile dealer in the Chicago Area and then resold to you in order to qualify. If you buy a non-functioning EV the cost of new batteries or other repairs counts as a conversion cost.

The Rebate reduces the conversion cost. For example, a typical conversion will cost about \$ 8000 for parts and contract labor. The net cost to the owner after rebate will be \$ 1600. You must document your expenditures.

Other States have similar programs under the Clean Cities Banner.

If you have questions about the Program, call Darwin Burkhart, Air Quality Planning Section at (217) 524-4343. The program is scheduled to end this year.

ELECTRIC VEHICLE CONVERSIONS FOR SALE

As the Presez notes on Page 1, three FVEAA members have electric vehicles available for purchase. In these days of gasoline pump prices at almost \$ 2/gallon and sure to go higher, and rebates that will end this year, now is the time for members wanting an electric car to act.

Steve Leisner, who lives in Racine, WI, owns the first one. He has a 1982 Volkswagen Rabbit he converted in 1994. He bought a complete conversion package from KTA Services. It is a 96 volt system with an 8" Advanced DC series wound motor, Curtis Controller, KW battery charger, and a Sevcon DC-DC converter. Steve has regularly used the vehicle for work commuting, 30,000 miles so far. A job change is the reason for sale. Steve says it will need a new set of batteries. He is asking \$ 2,300. Steve lives in Racine WI at 1617 Quincy Avenue 53405, (262) 634-4470. Steve will be unavailable between May 25th and June 1st.

Ken Meyer's son, Wayne, is looking for someone to finish the Ford Festiva that Ken was working on and will soon become a part of Ken's estate. Conversion is 90% complete with new batteries in place, an aircraft starter-generator motor, and controller. The car may be inspected at Ken's home in St. Charles, 1303 Indiana Street 60174. Call (630) 584-6057 for an appointment. Information on the car that I received from Wayne was forwarded to the FVEAA e-mail list.

The Presez Column mentions a Mazda RX-7 shell that will shortly become available. John Emde has made alterations for batteries and motor mounting. The shell will require bodywork, ideal for someone who can do this. John Emde (708) 447-4616 (Work) or (630) 968-2692 (Home) is the guy to ask.

EV EXHIBITING OPPORTUNITIES

You should receive this newsletter before May 12th, which is the date for the Second Annual Alternative Energy Fair. It will be held at the International Brotherhood of Electric Workers (IBEW) Training Facility at 127th Street & Ridgeland Avenue in Alsip. This year's event is being sponsored and planned by the Illinois Solar Energy Association, the IBEW, and the State Department of Commerce & Community Affairs. So far two FVEAA cars will be at the event, *Bad Amplitude* (With a new paint job and different batteries), and Fred Kitch's Ford Ranger. Ken Woods is handling the event. If you have questions call Ken at (630) 420-1118.

We should begin thinking about car exhibits at local Independence Day Celebrations. I am inclined to return to Riverside where last year Fred Kitch and I had cars in the parade. Check your local situation and get your car in a parade. In the past we received much attention by being in Wheaton's Parade, the largest in the Western Suburbs.

The **BIG EVENT** will be the start of this years *American Solar Challenge*. The solar car race will start on July 15th from Chicago's Museum of Science & Industry and end up in Los Angeles by July 25th. Much of the driving will be along old Route 66. About 50 solar cars built by university students will compete.

Net Gain has been invited to have *Bad Amplitude* on display. I have asked the owners of five working conversions if they can attend. We will need an opportunity charge at the Museum for most to make the round trip. Kevin Zak has assured me that we can always get a charge using the generator mounted in the Net Gain Transport Trailer. Please let me know via e-mail or phone if you can attend. We have something to say about the usefulness of our cars for trips within their range.

STARTING THE TRITON PROJECT

The Triton Project will get underway on May 19th. I will present a general overview of the conversion process and the basic elements of physics applying to vehicles. Ray Oviyach will then give the work rules applying to those participating. These include mandatory safety glasses for shop work.

I ask that members who will be working on the first day of the project bring their toolbox with the usual wrenches, pliers, screwdrivers and other hand tools. I don't know what the hand tool situation will be at Triton.

We will generally follow the flow chart shown on the next page. After the classroom work we will move to the shop where Ed Meyer will take baseline weight measurements of the vehicle.

The next step is to remove the hood, truck bed, radiator, identify, tag and then disconnect all electrical connections to the engine. Mechanical connections to the engine will be removed next. If time permits we will also remove the engine-transmission assembly.

The truck will then be relocated out of the shop for storage until the following Saturday. Triton Automotive Shop Rules require a complete cleanup of the worksite and no storage of cars or parts.

The second session will be on May 26th. Classroom work will be devoted to preliminary design aspects of the conversion, including where and how to locate the battery racks, and prepare schedule for the remaining tasks. In particular we will need to produce a sketch showing requirements for battery racks so these can be provided to the contractor for fabrication. We will also decide on instrumentation. Shop work will first complete any tasks remaining from the first session. Then the engine and transmission will be separated and the transmission delivered to a contractor who will do the machine shop work to couple an electric motor to the transmission. With the engine-related components removed we decide the placement of other major elements.

The third session will be on June 2nd. Classroom work will cover the power elements of the new drivetrain; motor, controller, and batteries. The interconnections of these devices will be presented. Shop Work will be the installation of the battery racks under the truck bed and installation of a conduit to carry the power cables from the batteries to the engine compartment.

The fourth session will be on June 9th. Classroom work will present how a controller regulates the motor speed. Shop Work will be allotted to catching up on uncompleted tasks and decision making on other items.

The fifth session will be on June 17th. This is also the FVEAA monthly meeting date. A schedule of tasks for the next four weeks will be in the next newsletter and will depend on our progress.