

FVEAA NEWSLETTER FOR April 2004

An Independent Not-For-Profit Corporation associated with the National Electric Auto Association

NEXT MEETING: Friday, April 16, at 8 PM in the Triton INDUSTRIAL CAREERS BUILDING, (East Campus), and Room 108

- DISCUSSION TOPICS:**
- 1. Is showing our EVs at community car shows effective?**
 - 2. What suggestions are there for overcoming 3 barriers to conversions – financing, time, and repairs.**
 - 3. Open Topics.**

MEMBERSHIP INFORMATION

Any person interested in electric cars is welcome to join the Fox Valley Electric Auto Association. 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 information about the FVEAA you may:
Visit the FVEAA Website at www.fveaa.org

Or contact FVEAA Vice President Steve Grushas
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PRESEZ

The facilities at Morton College's Alternative Fuel Event were excellent but attendance as disappointing. The College had publicity releases but only three local newspaper reporters and TV 32, Fox News Channel showed up. The main emphasis was hybrids. Thanks to Ray, Steve, and the Net Gain people who were there. The lesson I draw from this is that gasoline @ \$2/gal isn't high enough to drive interest in alternative fuels, including electricity. We need to consider this factor as we plan an electric vehicle seminar.

The season for auto shows at various communities is at hand. I received the 2004 notice from the Elmhurst group. I am skeptical about how effective these events are in generating interest, new memberships, and conversion projects. This will be a discussion item at our April meeting.

At the last meeting members brought up three barriers to conversion projects; financing, time, and repairs after construction. We will discuss these items and see what suggestions members have to offer.

BILL

MINUTES OF THE MARCH 19TH, 2004 MEETING

At 8:07 Bill Shafer called the meeting at Triton to Order. Nineteen members attended, including new member William Goosby from Chicago.

The minutes of the February meeting were approved as published. Treasurer Corel's report on the FVEAA accounts was accepted.

Bill read from an articles appearing in the March 29th Business Week magazine titled, "Are Refiners Boosting The Pain At The Pump? Refineries are now running at 92.8% of capacity. The top 10 refiners own 77% of the domestic capacity. Refining profit is \$ 6.74/barrel compared with a 5-year average of \$ 4. There is no incentive to build a new refinery that would cost over \$ 2-billion. Do these prices encourage us to say something about the usefulness of our electric cars? Some believe that even if gas gets to \$ 3/gal many persons would still buy a 12-mpg SUV.

He introduced the first discussion topic – should the FVEAA have a seminar this year? Peter Hartel said yes, and we should get the visitors into the drivers seat of a conversion or into a used EV. Used EVs are on E-Bay and sell for about \$ 5,000. Most require new batteries. A discussion concluded that we should ask ComEd to support a seminar this year. President Shafer and the Directors will follow up.

Fred Green, the former Editor of the Ottawa EV groups newsletter, has conversion parts formerly in his Jetta that was broadsided and dismantled. The electrical parts were not damaged. He had quite a struggle with the company since it was their first-ever experience with collision insurance on his electric. He had a \$ 19,000 insurance policy on the Jetta. The insurance company and received ownership of the parts he removed paid him \$ 12,000 from the wrecked car. These are available. Asking price is \$ 7000, (Canadian) \$ 5000 US. Make an offer to Fred at (613) 232-5950. Fred owns another EV, a British Dutton kit car but using an electric drive system.

Peter noted that repair of an EV can be quite a hassle. He has driven 4000 miles in the two years he has had the car. Repairs have been his biggest problem. His statement had a lot of support. President Shafer said we should never overlook this factor in our public statements about EV advantages.

Peter also mentioned the financing problems with converting or acquiring an electric car. Lending sources have no experience with an EV, particularly with one that is a *conversion*. They just say no. A nice donor car that has been converted and is in great shape can be valued at only \$ 1200 for loan purposes. The FVEAA should address this fact.

Member Chuck Carrington brought up another topic affecting conversions – time. Chuck has a young family and is fully involved with his children's activities. This leaves no time to for a usual 4-month conversion time, although we had two father-son teams on the Triton conversion class. I hope that this doesn't mean the FVEAA membership will be attractive to only persons looking for a post-retirement activity and who have the financial resources a conversion requires. (Send Bill an e-mail with your observations and suggestions)

The Morton College Alternative Fuel Day on April 2nd was the next topic. We lost cars originally planning to be there.; George Gladic's Nissan has been sold, Todd Dore's is up for sale, and Paul Harris' conversion is not quite ready. Ray Oviyach will tow the Triton Ranger, Steve Grushas will bring his Escort, and Peter Hartel will try to make it. Net Gain will bring the dragster.

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Cracks have developed in some short-radius 2/0 cable bends. These are a display, not an operational problem. Dale Corel said a silicon paste could be used to repair these.

Kevin Zak gave an update on dragster test activities. These were delayed by six months. The dynamometer first test used parallel strings of Optima yellow tops. Peak currents dropped the nominal 12 volts to an unacceptable 5 volts per battery. The string had a resistance of 30 milliohms. Weight and space limitations preclude additional batteries. (The original dragster used Hawker batteries).

Tests were made using Russian-made supercapacitors made for the starting tank engines in Siberian service. A conventional battery would be useless at the low temperatures there. Construction is similar to alkaline batteries. They are rated for 10,000 discharge-charge cycles.

Each capacitor unit added about 20 horsepower to the motor output, but the voltage faded about halfway through a test run simulation. A combination of Optimas batteries and capacitors added about 100 peak hp that held up during the run duration. The capacitor string had a resistance of one-third that of The Optima's.

Net Gain is enthusiastic about the performance of their Rudman PFC charger. It accepts any input voltage up to 270 volts ac. It is power factor corrected and produces an output of 12 to 360 volts DC. It draws up to 50 amps from a 230-volt ac supply circuit and delivers up to 80 amps dc.

The meeting was recessed to the garage at 9:40 and adjourned at 10:45 PM.

Respectfully submitted by member Rob Glowacki, acting Secretary
April 3, 2004

FROM OTHER EV NEWSLETTERS AND ARTICLES AFFECTING EVs

The Mar-April issue of Current Events, from the National EAA, in a cover article written by a Trevor Blackwell, a member who built his own balancing scooter. It isn't as sophisticated as a *Segway* but is much less expensive. For example, he used two wheelchair motors costing \$ 266 each. His battery is made of 20 6-cell batteries usually used in radio-controlled cars. Cost - \$ 15 each. The builder notes he feels like, "a total techno-dweeb when riding it. He usually has to stop every block or so to answer questions. He found the speed and handling uncomfortable. Using it not relaxing. His spine was jolted by the roadway bumps. It is fairly tiring to ride because a static posture is required.

Ed Thorpe, of the East Bay (San Francisco) EAA noted the E-Bay sale of EV parts left after the demise of the *SMART* electric car project. Fourteen cars were auctioned, nine rolling chassis and four partially-converted. SAFT high-energy lithium-Ion battery packs sold for \$ 3-8,000 each. These packs were designed for 273 volts, stored 11.6 kWh, and weighed 330 pounds. Solectria ac motors and controllers were used in the project.

Rod Wilde had a stimulating article concerning the *GOING POSTAL*, a vehicle constructed for racing competition this year. Later it may be offered as an all-wheel drive commuter vehicle. It resembles a 1983 Grumman vehicle widely used by the Post Office, but with a huge difference. It uses 40 Exide *ORBITAL* spiral-wound, sealed batteries in parallel, 240-volt strings. There are three motors; the front is a 9"GE. And the rear has two 8" motors of the type used for the now-defunct *SPARROW*. He points out that tire "burn-out" will feature the front and rear wheels spinning in opposite directions.

FROM OTHER EV NEWSLETTERS AND ARTICLES AFFECTING EVs – Concluded

The DEVA March Newsletter had an interesting article about Member John Olson's 1995 Honda Civic EV conversion. AC Propulsion Systems built the car in 1995 for Southern California Edison Co. The car needed new batteries and was sold in 1998 to John , who worked for Optima Batteries at the time. Since acquiring the car John has driven it 13,000 miles.

The car has a 100 kW AC electric motor. It weighs 90 pounds and provides 133 peak HP and has regenerative braking. The motor is connected to the Civic manual transmission that is run dry and locked in first gear. The car has 28 Yellow top batteries that provide 330 amps @ 300 volts. Top speed was 144 mph. On a dragstrip the car did a ¼ mile in 16.6 seconds. It was at 80 mph top speed 2/3 the way down the dragstrip. This illustrates the advantage of an ac drive – constant torque over the entire speed range.

EEVC, the Newsletter from the Eastern Group. in their March issue took a look at the new Prius Hybrid. They note there is a 12-15-month waiting list for these vehicles. Detroit plans to have some on the market in 15-months. The Prius battery contains 28 individually replaceable NiMH cell packs. System voltage is 212 volts. The battery costs about \$ 3,000 and is warranted for the life of the vehicle. The electric drive motor is a permanent magnet ac synchronous type rated at 50 kW (67 HP) and delivers 295 foot-pounds of torque. The engine-motor combination together in the hybrid configuration delivers 82 kW (110 HP) that gives the 2950 pound vehicle a top speed of 105 mph. It covers a ¼ mile in 18.3 seconds. The article notes if the car is left standing, the substantial parasitic electrical load can discharge the battery in 2 ½ weeks.

The issue notes that the Northeastern Sustainable Energy Association that sponsors the annual Tour de Sol has run into a financial rough patch. As a consequence this year's event has been shortened. Dates are May 21-24th, starting in Burlington VT.

Member Dave Patterson is offering his 1981 VW Rabbit conversion for sale - \$ 2500.

VEVA, the Vancouver group, in their March issue reported on preparations for their annual **Ride Electric Vehicle (REV)** event. According to their financial statement this event is a consistent moneymaker for the group. Rich Rudman had an article explaining why he only uses DC-rated "semiconductor" fuses in power circuits. He has found that other types can melt and/or explode under the high fault currents encountered during short circuits.

The April 5th issue of Business Week has an article about Saudi Arabian oil inventory. The Ghawar field in the northeast part of the country is the oldest. It produces 7-million barrels a day (mbpd) and has 70-billion in proven reserves. The Safaniya field near Kuwait produces 1.2 million mbpd and hold 35-billion barrels. The newest field, Shaybah, is in the Southeast part of the country, produces 0.5 million mbpd and holds 15.7 billion barrels. Saudi total production is about 8-million bpd.

Matthew Simmons, an International oil expert, recently told an audience that, "The Saudi miracle of cheap production may be nearing an end. That is signaled when the oil field pressure drops and water starts to appear. The Saudis say they could ramp up production to 10-million bbd and sustain that level until 2042. (Editor's note. That is when oil prices will be seriously affected. That is when electric cars will be get the attention they deserve. In the meantime – enjoy your hobby.)