

FOX VALLEY ELECTRIC AUTO ASSOCIATION NEWSLETTER FOR MAY, 2000

**NEXT MEETING: Friday, May 19 at 7:30 PM in the Triton INDUSTRIAL
CAREER BUILDING, (East Campus), Room 139**

**DISCUSSION TOPICS: 1. Workshop review 2. Web status update 3. National EAA
membership report. 4. Member's projects.**

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 June will be \$ 10.

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

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MAY, 2000 PRESSEZ

We had our workshop on May 6th. The day was clear and 80 degrees. Three members drove their cars to the site, George Krajanovich's Dodge Omni, Fred Kitch's Ford Ranger, and my RX-7. George and I got an opportunity charge while the program was in progress. Net Gain brought their Dragster and that got a lot of attention. Dave Stensland trailered his GE Electrak from Yorkville.

It was an excellent program.. Ed Meyer's report on electric car use experience was outstanding. John Emde's presentation on the conversion process, using PowerPoint, was most informative without being too technical. Everything was great except the general public was missing, in spite of a flood of news releases sent out to newspapers and TV media. We will discuss what we can learn from this event.

Member Doug Mather moved with alacrity after we accepted his offer to give the FVEAA a web presence. Our site address is www.fveaa.org. Site construction is still in progress. Doug expects to begin linkages soon. I urge our members to visit the site, look at the picture of Doug's ELF and solar charging panel, and give him your comments as provided for on the page. The display contains a complete technical description of his car. The Website will be discussed at our May meeting.

The summer parade season is about to begin. Fred Kitch requested that I join him in the Riverside Fourth of July parade. Net Gain will also have the Dragster to prove the controllability of the one-megawatt of power in this vehicle. If any other member wishes to join us, please call Fred at (708) 447-6125 for information and registration form. There will be a display opportunity for the vehicles after the parade.

BILL

MINUTES OF APRIL 21, 2000 MEETING

The meeting at Triton College was called to order by President Shafer at 7:37 PM. Eleven members and one guest attended.

The April meeting minutes were approved as published. Treasurer Corel reported no change in the Savings account and \$ 2651.38 in the Checking account. His report was accepted.

President Shafer asked for a motion to pay Ken Woods \$ 50 for postage in mailing out press releases and notices for the May 6th Event. The motion was made, seconded, and approved.

President Shafer distributed a draft copy of a newspaper letter-to-the editor describing the May 6th Event, asking members to send it to their local newspapers. Six suburban newspapers were represented by member's present. President Shafer has sent out news releases to the Chicago Tribune, the Sun-Times, and five television stations.

The FVEAA website was discussed. Member Doug Mather has offered to set up and manage our website. Doug is an Internet Service Provider and this will be a great advantage. His offer was unanimously accepted with thanks. Member Dave Stensland, a member of the website task force, commented on web links to other sites concerned with electric cars. (The last time I checked using CompuServe there were over 7000 links). He commented that the National EAA site has a number of broken links to other sites. A communication President Shafer received from National EAA Chairman, Scott Cornell, indicated an overhaul of that organization was underway following the departure of Claire Bell for Denmark to work on Ford's TH!NK project.

The relationship of a new website and the present structure of the FVEAA were discussed. We are a local organization with the objective of providing information about electric cars to members and assisting them with their conversion projects. Our activities are funded by the annual \$ 20 per member dues. We presently have a manageable group with 59 paying members. We also have an exchange and complimentary list of 22.

This is small enough to allow President Shafer to maintain a membership database, prepare and distribute the FVEAA monthly newsletter. He stated that if the membership rises over 100, these jobs could become a chore.

The subject of an e-mail copy of the Newsletter was discussed. This would eliminate the postage cost for about one-third of our members who have provided e-mail addresses. Copy reproduction would remain unchanged because 100 copies are made to utilize the lower charges for this minimum. Also, the President will have to learn how to use the e-mail attachment option so the present formatting features would be retained. Regular e-mail is limited to text-only characters.

Member's projects were discussed. George K. reported the Curtis controller on his OMNI suddenly quit. The unit was returned to the manufacturer for repair and returned with the observation that a screw connecting the component board to battery B+ had fallen out. Member Ed Meyer noted members have experienced three failures of Curtis controllers due to product defects. This seems to be a rather high failure rate for FVEAA members using this device.

Member Paul P. bought the Emde-Hendricks Suburau and inadvertently left it in gear while towing the car. The aircraft starter-generator was destroyed and an unknown amount of electrical damage done to the controller. Paul plans to replace the unit with a new series-wound motor.

Member Dave Stensland has started his pickup conversion. He reports success using the Internet to locate specialized parts, such as a vacuum pump for brake assist and a used electric power steering pump from a Volvo that he needs.

Member Ed Meyer drove his new Honda *Insight* hybrid to the meeting. He is pleased with his acquisition. It is quiet and has peppy performance.

The meeting adjourned at 10:45 after a presentation by the Net Gain Dragster group.

From the notes of Bill Shafer in the absence of our Secretary.

FROM OTHER EV NEWSLETTERS

Current Events, the publication of the National EAA in their Dec-Jan document (Received in April) had a cover story about GM's EV-1. It states that GM intends to continue production of the EV-1. GM has nothing to follow the EV-1. Honda, Toyota, and other auto manufacturers have Ultra Low Emission Vehicles (ULEV) to follow the experimental electric vehicles they have furnished for leasing in California. Abandonment of the EV-1 would cost GM a lot of political support.

GM built the EV-1 in 500-vehicle blocks at the Lansing MI craft center. Block 1 was for 1997-8 model year. Block 2 was meant for 1998-9. GM leased 475 EV-1's as a part of their California marketing experiment. The Lansing Facility was shut down and will be rebuilt as a Buick plant. All equipment and EV-1 parts are being moved to storage. GM recalled all EV-1 vehicles due to unexpected fires caused by excessive heat in the inductive-charging ports. The port has been redesigned and leased vehicles will be retrofitted.

A GM press release states: GM remains committed to the EV-1 and development of other EV technologies.

The issue also contains an story about an EV-1 "rally" in Blythe, CA for persons who have leased EV-1. Blythe is about halfway between Phoenix AZ and Los Angeles.

A Report on NAVEI 99 conference noted that Georgia Power now has 400 electric vehicles leased to employees. Nissan has sold 130 of their ALTRA EVs to power utilities. Solelectia reports they have sold 400 conversions of Geo Metros. Hybrid buses seem to be doing well in test services. NiMH battery cost is down to \$ 300/kWh.

The EAA is conducting an auction sale of a completely refurbished 1981 Bradley. Starting bid is \$ 5000.

EEVC from the Eastern folks in Valley Forge in their March/April newsletter describes Ford's development of a new hybrid SUV that is planned to arrive in two years. They also report that Electrosorce will furnish batteries for hybrid busses manufactured for Chattanooga TN. The 12-volt batteries are rated 85 amp-hours.

Electric Grand Prix, now called the Genesee Region Clean Communities issue was dedicated to natural gas and other alternative-fueled ICE vehicles.

EV Circuit issued by the Ottawa CA group in their Mar/April Newsletter printed Fred Green's cost comparison between a gas and electric Fiero. Fred reports that over 6 years, the gas car had a total cost of \$ 5870 to operate. The electric version cost \$ 14,169 Canadian dollars, six years of mechanical maintenance totaled \$ 1260, Running costs were \$ 471, Battery replacement after 5 years was \$ 1920. Fred also had an article about VICOR dc-dc converter troubles. Using a 5-amp, 32-volt fuse instead of a 5-amp, 250-volt rated unit caused it. Fred's Fiero has a 96-volt system. The issue also describes an electric conversion of a Mazda Miata by EVCO member Pat Beirne. It uses a 9-inch Advanced DC motor and a 120-volt system supplied by buddy-paired Optima batteries.

The April issue of the VEVA Newsletter from the Vancouver group had an article about the *WIKE* a personal, 3-wheeled EV designed for inner-city travel. Pi manufacturing developed the vehicle. The "Electric Sun" has two 36-volt Nicad batteries that power two electric hub motors. The *WIKE* frame is built from alloy steel and aluminum. Synthetic fabrics are used to protect occupants from unfavorable weather. Pi is asking \$ 4995 for the product.

FROM OTHER EV NEWSLETTERS - Concluded

The April issue of EV News starts out with a description of the Dodge ESX3 hybrid. It has a curb weight of 2250 pounds, a 15 kW motor/generator, a 165-volt Lithium-Ion battery, an estimated fuel economy of 72 mpg, and expected price premium of \$3000 over a Dodge Intrepid.

They also report that Ford has sold 1300 electrified Ford Ranger pickups. Ford has also been selected to build 500 electric delivery vans for the U. S. Postal Service, together with 300 Rangers. New Rangers will all use NiMH batteries. Ranger lease price has been boosted to \$614/month for 36 months. Ford was also awarded the Calstart *Blue Sky* award for 1999.

GM will use a third-generation fuel cell van, the *Zafira*, as the marathon run pace car in the Year 2000 Sidney Olympic games.

There were two articles on hydrogen production. The first uses sodium borohydride which, when mixed with water, produces hydrogen gas and a borax slurry. The other was an account of hydrogen photosynthesis derived from pond scum algae.

The publication has new format that makes the publication much more readable. You can get a 1-year subscription to the magazine for \$ 40.

RECENT ARTICLES ABOUT THINGS THAT AFFECT EVs

I had to change the headline for this feature after my wife Polly an English Major Graduate from Northwestern University who noted the previous caption was incorrect. The articles **DO NOT** affect electric vehicles; they are **about developments** that do.

The May issue of *Popular Science* has a series of three articles about future cars that runs from pages 52 to 68. Included are hybrids, fuel cell energy sources, and small cars. The scope is too lengthy to present an abridged version in the FVEAA Newsletter. It becomes apparent that these cars will include hybrids in the near future, fuel cells probably using methanol later, and small urban vehicles will play an increasing role.

If you aren't a subscriber, I recommend you get a copy to read and put in your EV information folder for future reference.

The May issue of *Popular Mechanics* has an article captioned 80 MPG on pages 88-91 that describes hybrid cars developed by the Big 3 manufacturers assisted by Federal PNGV Consortium. The objective was to achieve 80 mpg for a 4-door family sedan. The article describes the *Ford Prodigy*, *GM Precept*, and *Chrysler ESX3* vehicles. All use direct-injection diesel engines with about a 1.5-liter displacement, motor-generators for power boost and small lithium-ion batteries. Ford and GM use aluminum, magnesium, titanium and composite plastics to reduce weight. Dodge uses injection-molded plastic body panels. All will be considerably more expensive than today's models.

RECENT ARTICLES ABOUT THINGS THAT AFFECT EVs - Continued

A clean technology powers up. *Business Week* 5/8/2000, page 102. The new NASDAQ sign in Times Square will not go dark in case of another New York blackout because it is powered by a United Technologies fuel cell. The power rating is 400 watts. The article describes three types of fuel cells; Proton-Exchange Membranes operating at 80 degrees C, Phosphoric acid (200 C), Molten t Carbonate (650 C), and Solid Oxide (1000 C). Only the first is a likely candidate for automotive use. PEM manufacturers include Avista (home power applications) Ballard (vehicular) H Power, and Plug

Power (homes). Ballard's cells currently cost \$ 300/kW that would have to come down to about \$ 50 to be competitive in automotive applications.

Hybrid gas-electric cars are brilliant, but untested. Chicago Sun-Times (Click & Clack column) A reader writes she is interested in one of the new hybrid cars. She wonders how mechanics will work on the vehicle. Tom & Ray's answer – The technology is brilliant. Switching between gasoline and battery power is computer controlled. You never have to plug the thing in – **but** no regular mechanic will be able to help you if you have a problem. Only dealers with specialized equipment and trained mechanics can do this. Somebody's got to be the guinea pig however.

Electric Cars' New Reputation Is For Speed. Lancaster-Fairfield Advertiser 2/13/00. The old image of an electric car as a road turtle is fast disappearing. EV's are now setting new speed and performance records. A sleek 25-foot long streamliner went 239 mph in Utah for a new EV land speed record last year. The unit has two electric motors developing 400 horsepower. The *Mazda Manaic* set a new ¼ mile drag racing record, covering the distance in 11 seconds. An EV race in Arizona last year had a converted Porsche turning laps at 112 mph. At the end of the run it was still drawing only 100 amps and running at 95 mph. A group of English researchers are working on an EV that will top the 300 mph mark.

Electric car zaps high gas prices. Tampa (FL)Tribune. Barry Sears has a 1976 Vanguard EV he bought used in 1989 for \$ 700. The car has a 40 mph top speed and will go about 40 miles on a charge. Monthly electricity cost has been \$ 14. Sears uses the car for a 3-mile commute to work and has a gas-powered car for longer trips. The durability of these vehicles is evidence of electric vehicle long life. How many 1976 ICE engine cars are today used regularly? Sears is a member of several national electric car clubs and says the Internet is the best place to find information about EVs..

Precious jewel. Chicago Tribune 5/9/00. At a recent block party in Grosse Point MI, the kids were standing in line for a ride in Craig Walworth's car. It was a GEM, built by **Global Electric Motors** in Fargo, ND. Four of the vehicles driven by clowns appeared in Detroit's Thanksgiving Day parade. Park workers last fall used a GEM to chase away geese from a park pond in Grosse Point. GEM has 90 dealers around the country selling the vehicles that are intended only for restricted use. The top speed is 25 mph, too low to be street-legal in Michigan. They are legal in other states such as Arizona and Florida that have extensive retirement communities. GEM cars sell for \$7695 for a 2-seat version. There is a federal tax credit of 10% available for purchase of these vehicles. **(Editor's note) Its unfair that the IRS interpretation of Congress' intention denies the same 10% tax credit for individuals who spend about \$ 7000 to individually convert their cars to electric drive and have vehicles with much better performance. This is something the EV groups need to change.**

RECENT ARTICLES ABOUT THINGS THAT AFFECT EVs – Concluded

Autos at the threshold of revolutionary change. Chicago Sun-Times 4/3/2000. Dan Sperling, head of the Institute for Transportation Studies at the University of California in Davis says we are at the beginning of a technological revolution in the automotive industry. Products leading this change are the hybrids from Honda and Toyota. AC Propulsion in San Dimas CA is another example with a prototype of their T-Zero sports car with faster acceleration than a Ferrari. Another example is provided by the *Sparrow*, a single-seat commuter car being produced by Hollister CA based Corbin Motors. Even GEM (See story above) makes his list.

The hybrids, sports cars, and speciality vehicles that succeed will be those that answer consumer current demands for ever-larger vehicles, phenomena driven largely by automakers advertising. **Editor's note. He neglects to mention the likely future price increases for gasoline, as supplies grow ever scarcer.**

Tuning out the gasoline gasbags Car & Driver May, 2000 (Commentary by Csaba Csere – Car Columnist)

The price of gasoline has risen about 50% in the past few months and politicians are getting into the act by suggesting dipping into the Strategic oil reserve, talking about repealing the 4.3 cents per gallon Excise Tax enacted in 1993 and other proposals. The increase was due to production reductions by OPEC and nothing else. Crude oil went from an abnormally low \$ 12/barrel to \$ 30. At \$12/barrel crude oil in a gallon of gas costs 20 cents. Added to this is 18.4 cents federal tax and

another 43 cents in state, Cook County and local taxes. Another 30 cents pays for refining, shipping and the rest for advertising and oil company profit. This totals up to \$1.11.

Car buyers seem largely oblivious to higher gas prices. A record 48% of new vehicle sales last year were trucks, including low-mileage SUV's. A big SUV can cost \$ 30 grand, is driven 14,000 miles a year, and gets about 15 mpg. The gas price increase will cost the owner \$ 625, an extra \$12/week. A SUV the owner would save about \$ 7/week if he bought a Dodge Intrepid. Now if you have the bucks to buy the SUV, are you going to downsize for \$7/week?

He notes that his brother-in-law runs an oil pumping operation in Long Beach Harbor. Last year the operation was nearly shut down because the cost of production were about \$ 10/barrel. At \$ 30/barrel the venture is minting money. Csere notes that same thing will happen to many marginal operations around the world as the price of crude escalates. Crude supply will rise and the price will stabilize.

Check out Website www.engineeringsystems.jp to find out about a new \$ 30,000 one-person helicopter from a Japanese Company. It looks like an oversized lawn chair suspended below two conterrotating propellers. This is about the weirdest transportation idea I have seen in a long time. It was spotted by one of our complimentary letter recipients in the **Chicago Tribune on April 2,2000.**

Speaking of something unusual, take a look at this Honda Step Deck hybrid exhibited at the Tokyo auto Show this year. How would you like to be driving this vehicle and experience a side-impact crash caused by some jerk who runs a red light while using his cell phone?