

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

Address Correction Requested

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NEXT MEETING: FRIDAY January 21 at 7:30 PM at Triton, INDUSTRIAL CAREERS Building (East Campus), Room 139.

DISCUSSION TOPICS: 1. Earth Day Workshop. 2. Triton student project. 3. Member's project status.

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 members to receive our monthly Newsletter that contains useful information about electric car components, construction, policies, and events. Membership is not required to attend our monthly meetings. Dues for NEW members joining in January will be \$ 18.

To obtain information about the FVEAA you may contact either President Shafer or Past President Woods

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January, 2000 PRESSEZ

MM Greetings. I'm tired of all the Y2K hype and decided to use instead the Roman Numeral for 2000. Just think of the simplification in putting the copyright year on movies, documents, and building cornerstones.

We will discuss the program and speakers for our Spring joint Workshop with the Illinois Solar Energy Association (ISEA). Every five years we have presented a program on electric car conversions. The last was at the College of DuPage. Ken Woods is working with the ISEA to hold the event at the International Brotherhood of Electrical Workers (IBEW) training facility in Alsip (115th & Cicero). The facility has an auditorium, large parking lot, plug-in spots for visiting EV recharging, and a 5 kW solar panel on the roof. Probably there are electricians interested in our activities.

I expect to have a response to our invitation to Triton for students to do a car conversion. (See the letter included in this Newsletter). We will discuss this subject.

BILL

DECEMBER 99 MEETING MINUTES

The December 19th meeting at Triton College was called to order by President Shafer at 7:41 PM. Ten members and one guest attended.

Minutes of the November meeting were approved as published. There was no Treasurer's report because Dale Corel was on his Christmas vacation. He did mention to President Shafer that many members had paid their 2000 dues.

The November tour of Warfield Electric was discussed. Everyone found the event to be informative and entertaining. A commendation resolution was approved for President Shafer to mail to Jerry Warfield.

An expression of thanks to Member Larry Claypool for setting up his exhibit of unique small cars after the Warfield tour and providing meaningful comments was approved.

Draft copies of a letter to Triton's President outlining a proposal for the FVEAA to assist Triton students in an electric conversion project. A work schedule will be required so a FVEAA member can attend each session. President Shafer offered to be the principal FVEAA representative on the project since he is only 4 miles away from Triton.

Members approved a sending the letter to Dr. Jorndt. A copy of the letter is included in this Newsletter.

Member's conversion projects were discussed. There appear to be six conversions planned for next year. Member Ted Lowe has contacted the owner of a Chevy S-10. He reports the owner wants an income tax deduction for donating the vehicle. The FVEAA is not an IRS-eligible not-for-profit organization so an intermediary will be necessary. Ted is working on this.

Ken Woods got a call from Ken Guill at Chicago's Museum of Science and Industry. They are restoring a 1923 Milburn Electric. The Museum contacted Richard Lane, Editor of the Ottawa Canada EV Newsletter, who purchased and restored a Milburn.

Ken Woods reports the Illinois Solar Energy Association has selected April 22, 2000 (Earth Day) as the date for a proposed joint ISEA-FVEAA workshop on electric cars and solar energy. The membership approved the date. Ken volunteered to ask the IBEW for a no-cost use of their training facility for the event. The facility has a 5 kw photovoltaic array on building roof.

Ken has the latest copy of the solar energy grant & subsidy programs for solar installations. Net metering of an interconnection with ComEd is permitted with safety equipment to disconnect the panel output from the power lines when there is an ac interruption.

Member Kevin Zak of dragster group reports they are upgrading the electric go-cart, improving the dragster, and converting a Mazda RX-7 to a high-performance vehicle.

Member Dan Wier, who is interested in "free energy" matters, brought a videotape of a demonstration that showed a number of toroidal wound coils that varied in size. The largest coil supplied a load of ten series-connected 100-watt incandescent lamps. The only connection was to the terminals of the toroid. It probably functioned as a transformer secondary. Members stated that something not shown was generating a high-frequency ac magnetic field which interacted with the toroids.

The meeting was adjourned at 10:22

Submitted by retreat Secretary Dave Aarvold in the absence of Dick Ness. Dick is having an angiogram to check his 14-year old heart bypass.

RECENT ARTICLES ABOUT ELECTRIC VEHICLES

Ford, Honda fueling up for alternative power. Chicago Sun-Times, 02/10/00 (Auto Show Insert). Ford and Honda will have alternative fuel Vehicles (AFV) by 2000. Ford's full-sized hybrid was unveiled at the Detroit Show. It combines a three-phase ac drive system and internal combustion engine. Honda's FCX concept car was exhibited with a methanol fuel cell system. Also shown was the Taurus-sized Prodigy concept that may deliver 70 mpg using a diesel hybrid powertrain.

The GM hybrid entry was the Precept concept. It has a rear engine and new aerodynamic design to meet the 80-mpg target of the Partnership for New Generation of Vehicles (PNGV) joint program between US automakers and the federal government. So far \$ 930-million was spent on this program. Another \$240-million is budgeted for this year.

Honda's Insight and Toyota's Prius, both hybrids, are commercially available this year for about \$ 20,000.

(Editor's note – FVEAA Member Len Fisher has bought an Insight. He promises a user evaluation after a reasonable test period).

Delphi testing fuel cell that runs on gasoline. Chicago Sun-Times 12/28/99. Delphi is a subsidiary of General Motors. They are investigating a solid-oxide fuel cell developed by Global Thermolectric. The system incorporates a gasoline reformer supplied by Delphi and a fuel cell developed by Global.

Small wonder. Chicago Tribune 12/30/99 (Auto Section, page 1). This intriguing article is a chronicle about the British Mini, now owned by BMW. The initial car design was made in 1959 with an 848-cc engine that delivered 34 horsepower. It was the first vehicle to have a sidewise-mounted engine with front wheel drive. It was named the mini for the then-famous miniskirt. In 1995 it was named as "The Car of the Century". 1996 sold 5.2-million minis. The car presently has a 1275 cc fuel-injected engine delivering 63 horsepower, and selling for \$ 14,150 in the U. S. BMW will introduce the 2001 Mini in either Europe or Asia.

Better idea. Chicago Tribune 1/6/00 and Chicago Sun-Times 01/11/00. At the Detroit Auto Show, the Ford Chairman announced formation of a new group to develop a line of AFVs. It is called the TH!NK Mobility and will function along line similar to Ford's Lincoln and Mercury organizations. The original electric vehicle was developed in Norway where further development will occur. (There are currently two TH!NK vehicles: the CITY is a two-seat commuter with nicad batteries. It has a 56-mph top speed and 55 mile range; the NEIGHBOUR is a four-seater with lead-acid batteries, a top speed of 25 mph and 30-mile range. (

Editor's note – Claire Bell, the former Editor of the National EAA Current Events) recently joined Ford and went to Norway to work on TH!NK vehicles.)

Versatile Vehicle. A photo of GM's TRIAX, a concept car with a hybrid drive train. It drew lots of attention at the Chicago Show.

Fuel cell bus puts Chicago in the driver's seat. Chicago Sun-Times 12/19/99 and 01/17/00. The Chicago Transit Authority (CTA) has been testing fuel cell powered buses since March 1998. As part of the contract with Ballard, the CTA bought shares in Ballard, a move that cost the former CTA Chairman his job because of conflict-of-interest charges. The CTA paid \$ 1.8-million each for three buses that were placed in revenue service, spare parts, a hydrogen fueling station, and technical assistance from Ballard. The vehicles accelerate faster than their diesel engine counterparts, have a 200-mile range before refueling, and to the passenger the buses are the same. The big payoff is lack of combustion emissions and possible attractive purchase prices for commercial versions. The test will end in March and the CTA must decide if it wishes to continue the test at \$ 700,000/year, have the vehicles upgraded to incorporate new technology, or sell the units back to Ballard.

RECENT ARTICLES ABOUT ELECTRIC VEHICLES – Concluded

Electric Vehicles Get Better Batteries. Machine Design, February 24, 2000. The US Battery Consortium, working with Saft, America, recently produced an improved NiMH battery. Each 12-volt unit incorporates a resealable vent in each cell to allow gasses to escape during equalization overcharging. It also includes a thermal-management system and restraints to prevent unit bulging during recycling.

A 30-module pack has a terminal voltage of 360 volts and stores 40kWh. The pack measures 925x2005x229 mm (26.5x79x9 in.) and weighs 1422 pounds. Power rating is 90 kW and max current is 350 amps for 30 seconds or 220 amps continuous. Packs are going to DaimlerChrysler for the EPIC vehicle.

FROM OTHER EV NEWSLETTERS

EEVC, the Eastern Group in Valley Forge, in their February Newsletter featured the 20th Anniversary dinner held at the Boyertown auto museum. It was held despite a new snowfall of 12 inches. Many hours were spent modifying a GE Elect-Trak for snowplowing duty at the facility. They discovered that turf tires are suitable for snowplowing. Nineteen vehicles were on display for the event.

They also reported that Rome had designated Sunday, February 7th as a car-free day to dramatize the serious air pollution that vehicular traffic causes. Only taxis and buses were operating.

Electrosources in San Marcos Texas announced the successful completion of a yearlong test of five Orion hybrid buses that company produces. The vehicles have a propulsion system furnished by Lockheed-Martin. Another test of the Orion buses will take place in 2001 when New York City Transit receives the 125 they have ordered.

Italian car designer, Pininfarina, exhibited its new hybrid, the METROCUBO. This six-seat vehicle is a successor to the ETHOS that was just 3.0 meters long, 1.7 meters wide, and has a hybrid powerplant. The vehicle has no side doors.

Future Drive, the Argonne Lab's publication, described the hybrid vehicle developed by the University of Wisconsin-Madison as their entry in the Future Car Challenge. They were the winners in the fourth and final Challenge event held June 2-10 of last year. Their entry was called *The Aluminum Cow*. In tests it achieved 54.6 mpg. It was a parallel-connected hybrid with a Ford Europe 1.8-liter diesel engine burning Fischer-Tropsch diesel fuel, and a Solecrista motor with a nicad battery pack made up of 840 Sub-C individual cells packaged in 56 18-volt strings to give a 270-volt system. The battery pack measured a mere 20x30x10 inches and weighed 110 pounds and had a rated energy storage of 2.16 kWh. The cells were donated by Milwaukee Electric Tool where they are used for their cordless drill units.

The next challenge will involve electric trucks.

VEVA, the Vancouver group, in their December Newsletter lead article described investigation underway to test the Electrofuel Lithium Ion SuperPolymer battery for EV use. It is a joint investigation with the U. S. Battery Consortium. The battery is currently used in a laptop computer application. It has a volumetric energy density of over 470 Wh/Liter and an energy density of 190/Wh/kg. Additional information on this product may be obtained on the web: <http://www.electrofuel.com>