

# FOX VALLEY ELECTRIC AUTO ASSOCIATION NEWSLETTER

**NEXT MEETING: Friday, JANUARY 19, 2001 at 7:30 PM, Room 108 in Triton's Industrial Careers Building (East Campus)**

**DISCUSSION TOPICS: 1. Conversion car for the Triton Project. 2 Membership renewal status. 3. Future newsletter content. 4.Open Topics**

## 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 January will be \$ 18.

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

Past President Ken Woods  
1264 Harvest Court  
Naperville, IL 60564-8956  
(630) 420-1118  
E-Mail: CasaZeus2@aol.com

President and Newsletter Editor Bill Shafer  
1522 Clinton Place  
River Forest, IL 60305-1208  
(708) 771-5202  
E-Mail: Assessorbill@cs.com

**OR LOG ON TO OUR WEBSITE [www.fveaa.org](http://www.fveaa.org)**

## January, 2001 PRESSEZ

Member Ray Oviyach has been looking for a pickup truck suitable for the Triton Project. He may have located one but it has an automatic transmission. Ray will have the vehicle at the Jan meeting on a lift at the auto shop so we can look it over and then discuss the suitability of this vehicle.

We will have a report on the renewal status of 2001 memberships. It will be interesting to see if renewals have declined due to change in interest, use of the Internet, or other reasons. I recommend the FVEAA authorize an e-mail membership class for persons who have been regular members for the past five years but who do not renew for 2001. This will enable them to continue to receive the Newsletter by e-mail. I believe these former members may retain an interest in electric cars. This would be a way of staying in touch. The marginal cost to the FVEAA would be zero.

Future newsletter content will be discussed. It becomes clearer each day that the auto manufacturers have abandoned battery car development in favor of hybrids and fuel cell cars. There are practically no articles from manufacturers about electric vehicles except for a growing interest in Neighborhood cars that are a small step above a golf cart and not exactly cheap.

There are other subjects **affecting** electric cars. Gasoline price remains high, there is concern about oil supplies, and there is agitation about increased emission controls on coal-fired power plants. CNG as a fuel rapidly loses its attractiveness with natural gas prices that are through the roof and unlikely to decline significantly for many months. Utility deregulation in California has produced an electric energy supply crisis in California. Should these subjects be reviewed in future issues? What do you want to see in future Newsletters?

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power level was less than a hair dryer. The team used a GPS system to optimize energy use. The entire route was mapped and every hill requiring an increased power level was noted. The driver could anticipate this and have a smooth acceleration that reduced the peak power level.

## From Other EV newsletters and articles affecting EVs – Continued

**The Silicon Car. Forbes December 25, 2000, page 272.** Commentator Peter Huber states that silicon is taking over the orchestration of the many mechanical parts in an IC engine. A 130 horsepower Buick can be thought of a 100 kW peak power device with about 2 kW of electrical devices. The rest is powered off the engine by a series of belts. Using electric actuators for power steering, going to all-electric brakes, and substituting linear actuators for shock absorbers will improve the car and engine control. Electric drives are lighter and smaller than their mechanical counterparts. He notes that a 2-inch electric cable can convey as much power as all four engines on a jumbo jet.

The key will be an integrated starter motor/ alternator that replaces the engine flywheel. Silicon controls are already common in locomotives, mining machinery, the F-16, and nuclear submarines. It is just a matter of time until Detroit catches up.

**What's Bottling Up Natural Gas? Business Week 12/4/2000, page 46.** In November of 1999 a therm of natural gas (1000 cubic feet) at the well was \$ 2. It is now over \$ 6. The wail from residential customers is rising after receiving their December heating bills. A surging economy, 30,000 megawatts of new gas-fired electric generators, a much colder winter, and rising oil prices all contributed to the rise. US annual consumption is expected to increase in 2001 by 3.3% to 22.2 trillion cubic feet. The balance between supply and demand is seriously out of whack.

The big sources of gas have been depleted. Gas wells in the Gulf of Mexico account for 25% of the supply. Earlier gas fields there contained an average of 420 billion cubic feet. New wells only hold 30 billion. The situation probably will get worse. Editor's comment – In the Carter Administration gas use was reserved for residential heating where the customer did not have a choice of fuel.

Nuclear power and coal may become beneficiaries of the gas squeeze.

**Current Events, the national EAA Aug-Sept delayed publication,** had an article written by EAA cochairman Kurt Bohan about the EV work at Hangar 20 located in the former Alameda Naval Air Station. Last year the EAA was offered \$ 250,000 of risk-free money to take over Hangar 20 and to continue EV development work. The facility plans to continue to be an EV hatchery.

Mike Brown authored an article on "What kind of car to convert". He discusses the importance of first defining how you plan to use the car, determine if the proposed donor car is suitable, check the space available for batteries, and realize the importance of Gross Vehicle Weight. Rust and excessive body damage must be avoided.

The issue also covered the Silicon Valley 2000, an annual EV Rally at Stanford in September. The oldest EV at the event was Bill Palmer's electric version of curved-dash Oldsmobile. New vehicles at the rally were AC Propulsion's T-Zero, a Nissan Hypermini with a lithium-ion battery, the Ford/Grumman new Postal Service Van, a Ford TH!NK, and a Prius. About 2000 persons attended.

## From Other EV newsletters and articles affecting Eve's – Concluded

**DEVCO, the Denver Group, in their December issue** had an interesting article concerning California's Zero-Emission Grant Program. The State will provide grants to individuals and others to encourage the purchase or lease of a new zero-emission vehicle. The grant will reimburse 90% of the cost above \$ 1000 for a qualifying vehicle. There is a \$ 3000 cap. The vehicle must be acquired between Oct. of 2000 and December 31 of 2002.

They report that GM will not use a fuel cell in its new *Precept* vehicle. The fuel cell will be in a Chevy S-10 converted pickup. GM will use a 16-gallon tank of liquefied hydrogen.

D-Chrysler will be testing a prototype Jeep Commander SUV with an onboard methanol reformer. Mercedes will continue work on the Nectar that uses a *Ballard* 75 kW fuel cell unit, a NiMH battery, and three hydrogen storage tanks pressurized to 350 bar (5000 psi).

**The December Issue of EV News** cover story describes the California Fuel Cell Partnership (FCP). Nine automakers, three oil companies, two fuel cell developers, two gas suppliers, a methanol seller, and two municipal bus agencies are members.

Ford has commissioned Xcellis of Pomona CA to produce an experimental fuel cell vehicle using the Ford TH!NK platform and the latest Ballard fuel cell version that is lighter and smaller than the previous model. Hydrogen is stored as a compressed gas.

Honda made an appearance at the California Fuel Cell Partnership inaugural with their FCV-3 produced at the Honda Research Center near Tokyo using an EV+ platform.

D-Chrysler has purchased GEM of Fargo, ND to enter the Neighborhood Vehicle market.

Ovonics deal with GM was moved to Texaco and later to ChevronTexaco in a merger deal.

**EEVC, the Eastern Group,** in their December Newsletter had an article on the hydrogen economy. They note a study that reported a Mercedes A-Class vehicle driving across Canada would emit 242 kg of carbon dioxide, a fuel cell with an onboard ethanol reformer would reduce this to 170kg, and if a natural gas reformer were used the emission would drop to 80kg.

The issue also had comments about the failed conference on climate change.

**EV Circuit, the Ottawa Club,** reports that the Los Angeles Budget Car Rental company has logged a million miles on EVs they leased at the Airport. Use of EVs prevented eight tons of air pollution, avoided the use of 50,000 gallons of gasoline, and saved renters \$ 50,000 in fuel costs.

**VEVA, the Vancouver Group,** in their December Newsletter also reported on the California FCP. They describe a hydrogen fueling facility in Sacramento. Liquid hydrogen is delivered by truck and stored in a 4500-gallon tank. It dispenses hydrogen gas at 3600 or 5000 psi. Cars use the lower value and buses the higher. Refueling takes about four minutes.

Doug Mather and Dave Stensland each received a \$ 4000 rebate check from the Illinois EPA for their electric conversions completed in 1999. It is a part of Illinois Alternate Fuels Rebate Program.