Fox Valley Electric Auto Association
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Address Correction Requested

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NEXT MEETING: Friday, May 24 at 7:30PM in Room K-161 at the College of DuPage, SE corner of 22d Street & Lambert Road in Glen Ellen.

DISCUSSION TOPICS - 1. Report on Dragrace results from May 15. 2. Meeting Room option choice.

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 member to receive our monthly Newsletter that contains useful information about electric car components, construction, policies and events. Dues for NEW members joining in April will be $ 12.

To obtain information about the FVEAA, you may contact either President Woods or Vice President Shafer:

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MAY 19 RESSEZ

1. I hope that many of our members can attend the May 15 dragrace event at the Joliet Racetrack.

2. We look forward to the race results report by members of our Dragrace Team.

3. We have to decide which option to select for our future meetings. No response yet from my letter to the COD Presiddent. We start paying $ 45 for room use in July unless there are changes.

KEN

ADDITIONS AND CORRECTIONS TO MARCH 19 MEETING MINUTES

The correct checking account balance was $2465.04.

John Emde reported the curb weight of his 1990 Ford Ranger before conversion was 3118 lbs with a max weight of 4220 lbs. His preliminary estimate of converted vehicle weight is 3500 lbs. It will use Optima batteries, a 1200-amp controller and a 9" Advanced DC Motor coupled to the existing 5-speed transmission.

Dave Aarvold - Secretary

MINUTES OF APRIL 19 MEETING

The meeting in Room M-147 at the COD was called to order by President Woods at 7:36PM. Fourteen members and two guests attended..

The minutes and Treasurer Corel's report waere approved. By consensus of members attending, the account balances will not be published in future Newsletters since it is likely the Newsletters will be posted on the Web.

The group moved to the larger quarters in Room M-145A for the remainder of the meeting.

President Woods read a letter sent to the COD President regarding the $ 15/hour charge they will institute in June.

There was a status report on the FVEAA effort to one again included owner-converted vehicles in the10% Federal Tax Credit. It was suggested that President Woods write to Representative Judy Biggert since her predecessor was helpful to the FVEAA in this matter back in 1992.

Recent new member George Hamstra, also a member of the racing group offered to set up a FVEAA Web Page. It's location is httP://www.ameritech.net/users/hostage/FVEAA.html. Editor's note - the site is now active.

Dragster construction is progressing. It will have Hawker batteris providing a 336-volt system, two Kostov motors and two T-Rex controllers. They expect the combination to deliver 2000 ft-lbs of tourque, 900 horsepower. John Wayland, the consultant to netgain technologies, the dragaster sponsor. There will be a special meeting on March 24 to hear his presentation. Postcards announcing the change have been mailed..

Member Fred Kitch had a second meter installed at his house for the off-peak charging of his Ford Ranger. His analysis on Page 3 of this Newsletter indicates a net savings of $ 4.62/month out a total billing of $ 63.21

Submitted by Secretary Dave Aarvold

MINUTES OF MARCH 24 MEETING

Fourteem members and guest Donald Holm of DeKalb attended the special meeting to hear the dragster report by Consultatnt John Wayland.

The frame has been completed by the builder and many components mounted. Go to Web http://www.ameritech.net/users/hostage/dragster/htm for pictures of the progress and description of components.

John discussed technical considerations of the design. He is President of the National Electric Drag Racing Association and considered the premier "guru". The dragster group expects to make its first competition run at the Joliet Track on May 15

From the notes of Bill Shafer.

RECENT ARTICLES ABOUT ELECTRIC VEHICLES

A book has been written about electric car program at GM. **The Car That Could,** written by Michael Shanayerson, published by Random House and priced at $ 25, describes the tortuous path GM's EV-1 had to travel. It should be read by those who subscribe to a "conspiracy theory" about obstruction of EV development. Turns out it is a matter of performance, cost, and marketing.

The following information was obtained from a Japanese source on vehicle development:

Toyota E-COM .

Dimensions - length, 279 cm, width 160.5 cm, height 147.5 cm.
AC motor output - 18.5 kw
Range - 100 km
Top speed - 100 km/hr
Toyota will sell 100-1000 vehicles to Toyota workers this year @ $ 13-15,000.
Expected on market in 2000.

Toyota - new Corolla

The company will try to recoup part of the huge investment in developing the *PRIUS* by using the engine in the next Corolla. *Prius*, is Latin for "to go before".

Nissan - Hyper Mini

A production model of the year 2000 car will be exhibited at the Tokyo Auto Show in August. In 2000 it will sell a 2-seat city commuter version.
Dimensions - length 250 cm, width 147.5 cm, height 155 cm.
Range - 100 km.
Top Speed - 100 km/hr.
PM motor output - 20kw

Mitsibushi - Fuel Cell car

Unable to compete with Toyota and Honda hybrids, the company will research and develop a small-sized fuel cell. Testing and debugging until 2005 when they expect to sell the car for about $ 25,000.

Tom Thumb, Your Car is Ready. Car & Driver. May, 1999. This story concerns the Corbin *SPARROW,* a one passenger, 3-wheel vehicle: length- 96", width- 48", and height-60". It is classed as a motorcycle; one with an automotive-type steering wheel, lap & shoulder belt (helmet not required) and windshield wiper. It weighs 1300 pounds with 600 pounds of that in thirteen Optima batteries (156-volt system). located below the axles. This makes it "stable as a paperweight". The single rear wheel drive is from a 15 hp brushless dc motor through a Harley-style cog belt.

Top speed is 60 mph. Range is also 60 miles. It stops in 30 feet from 30 mph. Car & Driver found the vehicle to be quick, responsive, and, "a hoot to drive". The *SPARROW* is manufactured by Corbin-Pacific and sells for $ 12.900. Additional information available on the Web at www.ev-sparrow.com or by phone from Chuck (408) 634-01100.

THE BIG NEWS OF THE MONTH

Honda Quits Producing Battery-Powered EV's. Los Angeles Times (Reuters) 4/29/99
American Honda has stopped producing battery-powered electric cars, becoming the first major automaker to acknowledge that it sees no future in marketing the costly vehicles. The Company said the EV Plus has outlived its usefulness as a research platform and was not accepted by the general public. Fewer than 2400 battery electric cars and trucks have been sold or leased in the United States in the last three years. Most leases were issued to businesses and governmental agencies required by law to reduce emissions.

Honda is reported to have spent "hundreds of millions of dollars" on the technology. It is shifting to alternatives such as fuel cells and hybrids. It is enthusiastic about its new VV hybrid car, expected to deliver 70 mpg with ultra-low emissions.

Thad Malesh, senior analyst and alternative-fuels specialist with J. D. Power & Associates in California said "Honda's decision sends lots of signals. They are certainly more honest than anyone else about battery-electrics."

In a related move Edison International in Southern California confirmed that it is closing its Edison EV subsidiary which installed 250 charging stations in California and Arizona.

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Editor's comment - It was bound to happen. The basic science of electrochemistry prohibits the amount of energy storage required for a 200-300 mile range in a reasonable weight, volume, or cost. A poor public response to the initial marketing efforts, primarily by GM, contributed to the Honda decision. The final nail in the coffin was an unfavorable economic analysis that an electric car could not be produced for a marketable price.

Individuals who for years have converted IC engine cars to electric power found this out by personal experience. **Range** is not a prime requirement. Converted cars with 35% of their total curb weight in affordable lead-acid batteries have been found by their owners to be useful vehicles. They have been utilized for job comminuting, shopping, and other short trips that account for over 70% of all driving missions. These cars are being used today to reduce emissions, reduce petroleum dependence, contribute to less balance-of payments, avoid global warming, **save money**, and are a source of personal satisfaction.

I hope that interest in commercial electric cars can now be shifted to self-built conversions and Electric Vehicle Associations throughout the country.

BILL SHAFER
5/7/1999

FROM OTHER EV NEWSLETTERS - Concluded

EEVC, published by the Eastern Group, in their April Newsletter had Part VII of the story about the assistance given to the Cinnamonsen High School entry in the Tour de Sol race. K&W Engineering loaned the group a charger suitable for the battery pack. PSE&G provided a facility and help with power wiring, Atkins Machine Company fabricated special connecting pins for the Horizon batteries, and the New Jersey Department of Transportation loaned a van an two dolly to move the vehicle to New York City for the race. The arrived on time at 11AM May 7, 1998. Bell Atlantic provided two free cell phones for the week of the race. The project was really the cooperative effort of numerous individuals and groups.

Argonne Lab's FUTURE DRIVE Spring edition had articles about diesel synthetic fuels, vehicles using M-85 (85% methanol + 15% gasoline), cars using E-85 (85% ethanol + 15% ethanol) and tracing ethanol from the corn field to fuel tank. Each of these fuels is being used by a University contestant in the *FUTURE CAR* Competition. There were no articles about electric cars.

EV NEWS, produced by Larry Desalt's organization, in their March issue had articles about many hybrid vehicles; Honda's V, Toyota's PRIUS, Ford's P, DC's CITADEL, and from GM, built on the EV-1 platform. Correspondent Bob Wing related his experience with changing the flooded batteries in his MA Roadster with OPTIMA units. He purchased ,at a concession price, 16 Red Top (RT) units manufactured in Feb of 1996 They had been in storage on a shop floor since then. They were supplemented by four NEW Yellow Top (YT) units. After 22 months of use, two RT and two Y batteries died. OPTIMA's response will appear in April.

The April issue noted a U. S. Postal Service is expected to issue invitations to bid on 500 electric vehicles by May 3. The last time an invitation went out, the winning bidder used conversions of Jeeps. (Editor's note - During a cold-weather trial in Minneapolis AT&T found that congealed differential grease cut the Jeep's range by one-half) The Electric Vehicles of America (EVAA) and the Electric Transportation Coalition (ETC) have merged and established a Washington DC office headed by Kateri Callahan. The combined membership totals 85 firms, including all U.S. automakers and utilities, component suppliers, and foreign firms.

The OPTIMA response to Bob Wing's article in the March issue appeared. They said 100% of battery production is subject to four final quality checks. Most failures are due to pack balance, particularly in series-paralled connections such as used by Bob. Batteries that have significant stand times are probably partially discharged and sulfated. Reconditioning charges can be effective in recovering the performance of sulfated batteries. Bob noted in rebuttal that one new Y was DOA . All new Y's were put on a four charge-discharge cycles of 25 amps for 20 minutes. All 20 of the R's were put through the same four cycles. He acknowledges the "buddy-pair" connected pack is not a preferred system. He first used Rudman Regulators, later replaced by the first ZIVAN Smoother Battery Management System in the U.S.

FROM OTHER EV NEWSLETTERS

Electric Grand Prix Corp, the Hoyone Falls New York Group, in their May Newsletter had no articles about electric vehicles. All articles were about Compressed Natural Gas matters.

EV Circuit published by EVCO - the group in Ottawa, in their Mar/April issue summarized the objectives of their Organization. They promote the use of electric vehicles as a viable transportation alternative that is ecological, economical, and available now. The encourage EV conversion projects and offer technical assistance to those having active projects. The expect the widespread adoption of electric vehicles will occur only when the major manufacturers produce electric cars with comparable cost and performance of gasoline cars.

Solectria has been named as an official supplier of EVs to the Montreal 2000 Project that is supported by utility Hydro Quebec. This project will provide supplementary funding to commercial and governmental groups wishing to integrate electric vehicles in their fleets.

Member Darryl McMahan had an account of the eviction from of his EV from a parking space in a private garage. A new building tenant (a governmental environmental department) needed the space for employee cars. He searched for a new parking spot with 120-volt plug in facilities. The local mass-transit agency wasn't interested. Owners of facilities installed for jump-starting cars declined. He finally reminded local governmental officials of their promise to install facilities made during previous EV promotions. A deposit of over $ 1000 would be required for circuit and meter installation, a parking gate, and cost of meter reading, billing, and energy use. He finally found a space but he must pay the regular parking charge plus a surcharge for the estimated 3 kwh of daily energy use. The City of Ottawa now has its first reserved parking space with an outlet.

On the INTERNET, Jack Gretta noted a "Bad Boy" charger delivers 84 volts and 11 DC amps (934 watts). At the same time, the 117 volt AC supply circuit ammeter reads 28 amps (3276 watts). He asks, " What happened to he other 2342 watts?". Answers provided: 17 amperes of heating that can mean **fire!** Mark Hanson said he burned up two extension cords, two AC outlets, and smoked up a section of his house wiring with the same effect. He recommended aa properly-wound ferro-resonant transformer with power factor correction in the front end.

VEVA, published by the Vancouver organization, had four good photos of EVs on their April cover. Shown were a CORBIN *SPARROW, a GEM Neighborhood Vehicle,* a FORD *RANGER,* and a Toyota *RAV-4.* There was also a description of a member's 1985 Grumman Electric Van that now has 24 Trojan T-125 batteries, an Auburn 700-Amp controller, and an Advanced DC 9" motor. Randy Holmquist is willing to sell the van. There are three other EV's for sale- a 1981 Datsun King Cab flatbed that needs new batteries for $8000 [Warren Bourgeois. (604) 538-7031)] , a 1979 Dodge OMNI conversion that needs refurbishing and batteries for $1000 [George (604) 987-7792)], and a 1981 Jet Industries *ELECTRICA* (Mercury Lynx conversion for $ 5000 (bglazier@istar.com).

SEPARATE ELECTRICAL SERVICE FOR AN ELECTRIC CAR

FVEAA member Fred Kitch decided to have a separate electrical service installed at his house to serve his new Ford Ranger electric pickup. ComEd ran a new service drop about 30 feet from its nearest pole to the garage. On the garage Fed had a new service entrance facility, meter mounting, and breaker installed to serve the Ranger charging plug. The new service is time-of-day that has much lower energy charges during the off-peak hours. These are the hours for charging while the truck sits idle at Fred's house. Fred is sharing the economics of the arrangement.

Charges for the second meter installaion were $ 250 for material and installation. ComEd charged another $ 231 for the hookup and establishing a new commercial account.. Total came to $ 481. The table below summarizes the energy charges for both his house and truck services Feb-March..

Bill Item	Energy (kwh)	Rate/kwh	House	Truck	If Combined
Customer Charge			$ 8.02	$ 13.33	$ 8.02
Energy Charge	400	0.0877	35.08	-	
	179	0.08770	15.70	-	
	428	0.03689		15.79	-
	207 (on-peak)	0.06724		13.92	-
Decomm adjust..	179 kwh @	0.00102	0.18	-	0.18
	428 kwh@	0.00102	-	0.44	0 .57
Franchise Tax		0.00983	0.24	0.29	0.57
State Tax	-	0.0033	0.59	1.41	2.00
Municipal Tax	-	0.0515	1.07	1.54	3.00
Total Bill	-	-	$ 25.79	$ 32.80	$ 63.21

According to Fred's analysis he saved $ 4.62 in Feb-March and is paying back about 1% the $ 481 installation cost each month. The analysis reminds us that the electricity cost is not a major factor in electric car ownership and use.

The charges will change when it comes to the summer months and utility rates increase.

With Apologies to Dr. Seuss

This is the story of Edison Stout
Who wouldn't check his batteries out
His owner's manual left no doubt
And his EV dealer would beg and shout
But Edison would not check them out

And when his GFI would trip
He just decided to bypass it
His EV tickled him quite a bit
His door grabbed him when he grabbed it

Corrosion grew like some disease
Across the tops of the batteries
A putrid rainbow, if you please
Like yellow pus, green cottage cheese
As wires turned to bluish grease
The floor dissolved by slow degrees

Batteries shot (just bought last Autumn)
His ample range was now forgotten
Charging smelled like something rotten
The floor's like mushy saurbraten

He'd still be driving it, no doubt
If molten lead had not flowed out
And acid geysers squirt about
Until, at last, said Edison Stout
"All right, I'll check the batteries out"

But, alas, it was too late
Corrosion covers the car, to date
From roof down to the license plate
And Edison suffered a terrible fate
That's just too horrible to relate

So, EV owners, do not pout
When asked to check your batteries out!