

Fox Valley Electric Auto Association

**PO Box 214
Wheaton, IL 60187-0214**

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April 2013 FVEAA Newsletter

The FVEAA is a Not-For-Profit Illinois Corporation and the Chicago Area Chapter of The Electric Auto Association

Note: Meeting Date and Place This Month

Next Meeting

April 19, 2013

Community Christian Church

1635 Emerson Lane, Naperville, Illinois 60540

at the intersection of Ogden and Richert Drive in Naperville

Also called the "Yellow Box." We'll meet in the little theater west side, 1st floor

DOORS OPEN 6:30 p.m. MEETING STARTS 7:00 p.m. ENDS 9:15 p.m.

Directions:

[Community Christian Church](#)

Agenda

- Call to order - Welcome
- Committee Reports
- Old business
- New Business
- The FUTURE OF TRANSPORTATION
- Walter Knake VP of Fleet Development at RePower - conversion of diesel engines to natural gas
- Break
- Dana Myers, President of Myers Motors "Chicago's 200 MPGe, Affordable, Electric Car Opportunity"
- Questions, Discussion
- Close

President's Words

Bruce Jones

Hi EVeryone

Last month we had the pleasure of hearing long time member Dennis Doney talk about a number of electric vehicle subjects from electric bicycle laws, Electrathon racing, Robert Llewellyn's Fully Charged Show video, to his Zap Xebra "enclosed motorcycle" and the things he does to keep it in top running condition. Thanks Dennis!

Last Saturday 4/13/2013 Rich Carroll helped run the Electric Car Challenge that area students and those from Brooks Middle School have been working towards for several months. The race was held at the Case New Holland facility in Burr Ridge. Rich did an outstanding job managing and teaching the students about electric vehicles on a small scale, culminating in a fun racing competition. Someday these students just may be working on the design and manufacturing of real electric vehicles, which relates to this month's theme.



Rich working on the track setup



Brooks Middle School
"Electric Vehicle Team Awesome"

This month we are presenting the FUTURE OF TRANSPORTATION and what the projected impact will be through the use of alternative fuels. It's a significant role.

1. First we'll have a brief overview of the plug-in vehicle market, some news and the recent Department of Energy projections on how Light Duty Vehicles will be powered through 2050 (Fuel cell, hydrogen, electric, petroleum etc.) Using these estimates 57% of light duty

vehicles (42% of ALL vehicles) will use an electrified drive train by 2050. If we assume the electric and alternate fuel infrastructure is in place, and we include fuel cell vehicles consuming natural gas and hydrogen, that light duty figure increases to 84%! This is a significant technology shift and we are a part of it.

2. Walter Knake, VP of Fleet Development at RePower will present on how his company converts older mid-size diesel engines to run on compressed or liquefied natural gas at their Missouri plant.

After a short break to view electric cars brought to the meeting, . .

3. Dana Myers, president of Myers Motors in Tallmadge Ohio will hold a discussion and present "Chicago's 200 MPGe, Affordable, Electric Car Opportunity." Besides presenting, Dana will be asking questions and holding a dialog with the audience on the potential for building a new electric vehicle industry here in the Chicago area.

All in all, the future of transportation looks extremely bright for alternative fuels and especially electric vehicles. We're already starting to see the shift from electric vehicles being viewed as unusual or different, to commonplace.

So hang on and get ready for a great evening.

Sincerely
Bruce

Photos from Last Month

Dennis Doney



Zap Xebra PK





ZAP the Mouse



Rich's Ramblings

Rich Carroll

Update on electric car competition for National Science Bowl

The Regional Run-off for National Science Bowl were held on April 13, at CNH (formerly Case-New Holland) in Burr Ridge, IL. The morning started with judging of the design competition, essentially awarding trophies for design and documentation. The winners:

Car Design Competition

1st Maple Middle School #14

2nd Daniel Wright Middle School #10

3rd Crone Middle School #9

Following the Design Competition, we commenced with racing. Each team's car competed in three heats, and the scores from 5th place on were based only on each team's fastest (of the three) heat time. The top four places were all entered into a finals race, and the results were:

Car Race Competition Final Race Times

1st Crone Middle School #9 6.06 secs

2nd Roosevelt Middle School #1 6.53 secs

3rd Eisenhower Junior High #17 6.72 secs

Round Robin Honorable Mention times
Roosevelt Middle School #1 4.69 secs
Maple Middle School #14 5.53 secs

(The honorable mentions were times run during the heats, but in some cases, teams were unable to run in the finals due to breakage, or ran but couldn't match earlier times due to tired batteries.

All cars ran a 20 M course (66 feet) carrying a Morton Salt container (the 'standard' 737 gram container). This salt container was notably heavier than the water bottles carried in previous years, and markedly affected some of the cars handling (especially those who did not track well in a perfectly straight line.)

The 2013 National Competition will be held in Washington D.C. from April 25 to April 29, 2013,

A very interesting article crossed my desk as I was writing this article. In the past, most EV builders were aware of the memory effect of the dry Nickel Cadmium batteries of the past. The memory effect shows up when the batteries are recharged repeatedly after only a partial discharge. The dry NiCad batteries have less usable capacity, as the working voltage goes down. Those of us who worked with this knew this effect well, and repeated short cycling was a death knell for many such batteries. It shouldn't have actually been the end of the batteries, but many people gave up, as they immediately needed full capacity, and they replaced the batteries. Repeated full cycling, from full charge to an almost exhausted state, would revive these short cycled batteries, but it took many dozens of cycles to get these cells back to original specs.

Battery people had long thought that the newer NiCad wet cells, and all Lithium batteries were immune to this effect. New research out of Japan seems to show that this effect has now been noted in some lithium cells, notably LiFePO4 cells. In this case, the loss of capacity was noted after one partial charge and subsequent discharge. Since almost all battery capacity calculations use cell voltages (or total cell voltage), this will produce marked changes in reported battery charge left when calculated by most gauges.

Obviously, one report is concerning, but this bears much more investigation. We'll watch for further developments.

Sasaki, Tsuyoshi; Ukyo, Yoshio Novak, Petr., "Memory Effect in a Lithium-ion Battery." N.p., 14 Apr. 2013. Web. 15 Apr. 2013. <<http://www.nature.com/nmat/journal/vaop/ncurrent/full/nmat3623.html>>.

Welcome

Bruce Jones opened the meeting at 7:00 p.m. and had members who drove electric vehicles introduce themselves and say a few words about their electric vehicles. Dues are still only \$15 per year, the best deal in town.

Old Business

Rich Carroll talked about the the Brooks Middle School kids 'electric car program sponsored by the Department of Energy and an update on the project with New Hope church The race will be on April 13th at CNH in Burr Ridge.

New Business

None

Committee Reports

Outreach committee report. if you'd like to help on a car show, please contact Rich Hirschberg at GoAFVs@yahoo.com . Many different shows are coming up.

Treasurer Todd Dore provided a finance report and the club is in good financial shape.

PEV News

Bruce presented some PEV news including results from a study in Japan and described the 1984 Porsche 944 that Steve Kaufman is selling (that the FVEAA converted in 2007) Steve can be reached at HANCISME@aol.com.

The Dennis Doney Enclosed Electric Motorcycle and Variety Show

Besides getting to know Dennis "scuba divemaster" Doney a little better and his ability to fix or make nearly anything, he thanked the club and Pioneer Conversion for the help and advice on his truck.

He then covered the following topics:

- Electric Bicycle Laws
 - In Illinois you must be 16 years old to ride a "low speed bicycle"
 - No permit required
 - Speed is limited to 20 mph
 - You don't need a helmet
 - Refer to 625 ILCS 5/11-1516 Sec. 11-1516. Low-speed bicycles
- Electrathon Racing (<http://www.youtube.com/watch?v=1SzZ4qt1kWk>)
- Robert Llewellyn's Fully Charged Show
- (<http://www.youtube.com/watch?v=YfTiRNzbSko>)
- Turning Over an Old Leaf
- (<http://www.salvage-cars-for-sale.info/salvage/nissan/leaf/for-sale/>)

- ZAP the Truck
 - Personal Experiences after 15 months and 5,000 miles
 - Why did I buy?
 - How do I like driving it?
 - What did I find as shortcomings? (long list)
 - Recommendations
- Zap Xebra PK Specifications
 - 3 Wheel Enclosed Motorcycle - All electric
 - 72 Volt AGM, Delta Q Charger
 - 5kw motor, 20 mile range, 45mph top speed
 - All wheel disc brakes
 - Independent rear wheel suspension
 - Rear axle sway bar
 - Very “aero” front cab compartment
 - Complete chassis lighting
 - No power assist anything
 - Barely a heater
 - Modifications galore
- ZAP the Mouse

Great job Dennis we enjoyed the show! And we'll miss you when you head to Florida later this year.

The meeting ended at 9:15 p.m.

Membership Form

Ted Lowe

FVEAA Membership Application Form

Name: _____

Address: _____

City, State Zipcode: _____

Phone: _____ Phone Type: Home ___ Work ___ Cell ___

Email: _____

Please check one: New Member _____ Renewal _____

How did you hear about the FVEAA ? _____

Member Types and Annual Dues (Please circle one)	Newsletter Delivery Types (Please circle one)
-----------------------------------------------------	--------------------------------------------------

Individual	\$15	No Newsletter	\$0
Family	\$20	Electronic Only	\$0
Business	\$100	Postal Mailed	\$15
Premier Business	\$250	Postal Mailed and Electronic	\$15
Charter Business	\$500		

Total Due from Both Columns:

Please make checks payable to "FVEAA" and postal mail it with this membership application form to:

FVEAA

PO Box 214

Wheaton, IL 60187-0214

Attn: Membership

FVEAA Business Members

Netgain Motors, Inc.



NetGain Motors, Inc.

Exclusive worldwide distributor of WarP™, ImPulse™, and TransWarP™ electric motors for use in electric vehicles and electric vehicle conversions.

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Plug-In Vehicle Solutions, Inc.

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