

**Fox Valley Electric Auto Association**  
PO Box 214  
Wheaton, IL 60187-0214

Return Service Requested

Monthly Meeting: **Friday, October 16th, 2009 - 7:00PM** (doors open at 6:30PM)

Meeting Location: **Packer Engineering, 1976 N Washington St, Naperville, IL 60563**

Directions: Packer Engineering is on the East side of Washington St, just North of the I-88 Tollway (North of Diehl, South of Warrenville Rd). Turn off of Washington onto Bighorn at the Packer Engineering sign, then take the first right into Packer Engineering and then an immediate left. Park in the lot between the buildings. 1976 is the new building up the hill. Enter the building in the middle of the North side.



## October 2009 FVEAA Newsletter

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

### Meeting Agenda

#### Business:

Call to Order and Introductions  
Old Business  
    FVEAA Yearly Elections  
    Committee Reports  
New Business  
    Moving committee reports to newsletter.

**Intermission** - Raffle tickets, refreshments, EV viewing and networking

#### Program:

**Tom Kaun** Tom is the founder of Inventek Corporation in New Lenox. Most recently, Inventek has been involved in developing materials and manufacturing processes focused in the lithium Battery industry. He will present a discussion of lithium battery structures and some advantages/disadvantages of some common structures.

#### **Field Upgrade of Controller Software (Intermission)**

**Miodrag Zubic** will demonstrate how his controller can be 'tweaked' in the field via a firmware update, demonstrating the behavior before and after to verify the update was successful.

We are pleased to start the year with a talk from Tom Kaun, from Inventek Corporation. Tom has worked most recently in the developing lithium battery industry, and can offer several insights into the difficulties of lithium batteries, and offer some suggestions to avoiding some of the lithium battery pitfalls. Tom's Rolled-Ribbon™ manufacturing process is a low cost, high quality alternative to other processes. His manufacturing process is scalable, and will apparently work well even for higher volume production

Much of Inventek's research is directly applicable to hybrid vehicles. Curiously, most of the current hybrids use a NiMH technology. Tom's technology is applicable to hybrids or electrics, and Tom is fully aware that many FVEAA members drive hybrids. . George Hamstra had suggested Tom for a presentation, and after talking to Tom, I agreed this would be very interesting.

Miodrag will finish the discussion of the controller rebuild started at previous meetings.

I have started to fill my files with upcoming programs. Obviously, I wanted to have available the most interesting, most timely programs to present, but in some months, nothing comes along. I plan to have several programs banked, in my file, that only need updating to be presented. Some of these programs will have guest speakers, some can be presented by FVEAA members. I thought a good starting point would be the EV controllers available today and soon. Hopefully a fair presentation should talk about costs, amperages, voltage ranges, efficiency, and difficulties associated with each controller. By the end of the year, there will be a half a dozen controllers that EV builders would want to use, so we ought to be able to show a comparison of available units on several different features. A similar comparison is due for battery chargers.

All club members should be aware of two developments from the Secretary of State of Illinois. First, the General Assembly has removed the stipulation that a separate series of plates be issued for electric vehicles. That likely means the "EL" plates that many of our cars use, will go away at the end of their cycle, which comes up 12/31/09.

In the same legislation (SB 1866) the state will begin licensing low speed vehicles including NEV's for use on lower speed limit roads. Expect to see a number of retailers selling these cars so that they can be registered just after the first of the year. The NEV's (neighborhood electric vehicles) are a part of this group. The NEV's have many similarities and concerns that full size EV's have, including batteries, charging, controllers, battery balancing, infrastructure, etc.

I also think that the committee reports seem to be misplaced, and favor those who attend meetings. I will request all committees to submit a monthly note to the newsletter, letting us know the details of committee business. This way all the members have the information, not solely the members who are able to attend meetings. It may speed the meetings somewhat. We need to talk at the meetings about what is coming up, and leave the reporting of past events to the newsletter. More on this as I discuss this with committee heads.

I think it is time to begin another club project car. Does anyone have an upcoming project that they want help on? Does anyone want to volunteer the space to take on a club project vehicle. Usually the recipient gets a bunch of free labor, and an occasional donated part or two to help defray expenses, and increase sponsor participation.

**Start:** 7:15pm

**Ted's Farewell remarks:** Outgoing president Ted Lowe expressed gratitude for serving the FVEAA as president for the last 4 years. During his tenure the club has grown from about 60 members to over 220! In addition, Ted has been responsible for numerous speaking appearances, showings for the movie "Who Killed The Electric Car", the 5th EVER all-chapters national EAA conference, and great work on the club's website, to name a few. His service will be sorely missed and we give a hearty THANKS to Ted for the last 4 years!

**Intros:** There were about a dozen new attendees this evening who all introduced themselves.

**Old Business - Officer Elections:** The nominations were closed and we took a vote by acclimation. Congrats to the FY 2010 FVEAA officers:

President - Rich Carroll

Vice President - Todd Dore

Director - Dale Correll

Director - Ken Simermon

Secretary - Bruce Jones

Treasurer - Ted Lowe

We look forward to a great year with the new FVEAA leaders!

Dale Correll got a big special recognition as outgoing club treasurer - a post he has held **Since 1981!** Thank you Dale! Ted presented him with a copy of the book *Convert It!*

**Committee Reports:** Legislative Affairs - Todd Dore mentioned that SB 1866 IL was signed into law by Governor Quinn. The good news is that this law will allow NEVs to be legal in IL. The sad news is that we are losing our specialty electric vehicle plates effective 1/1/2010. We wish to thank all of the club members who contact their elected officials, especially Rich Carroll for producing a form letter to the governor. Despite the setback, electric vehicles are here to stay and we want to keep up the good fight! Howard Hansen also mentioned his upcoming court date - for the expired plates on his EV truck (Howard has been battling the State over EV plates for his truck for about 1-1/2 years now). We will be interested in knowing the outcome of this case.

Outreach - Rich Hirschberg spoke about the Elgin car show - in which the Midwest AFV expo was included. Thanks to Tim Moore and Howard Hansen for bringing their EVs. Also, Ted mentioned the 2009 Solar Tour on Oct. 3rd. Both Ted and Todd Dore have extended invitations to see their solar homes and get a free plug in for your EV on that day! Rich mentioned an upcoming cruise night in Rockford (Belvidere), and Todd mentioned a cruise night in Riverside, IL.

**New Business:** Ted has joined a local Chicago committee that has been formed with the express purpose to bring many charging stations to the City of Chicago. We look forward to hearing about the public progress of this committee.

**Raffle:** Howard Hansen agreed to be the Raffle Meister. There were many prizes, such as an Entertainment Book, a Net Gain polo shirt, a Pioneer Conversions car cleaner, reusable shopping bags, Solar Today magazines, and 2 rides in a Tesla Roadster! Howard raised \$85 for the cause, which may be a record. Congrats to the winners!

**Presentation:** Jim DeBoth spoke about his Tesla Roadster, and the joys of ownership.

**Meeting Adjournment / Show & Tell:** The meeting adjourned at 8:30pm and we had show and tell until 10:00pm. There were 7 EVs at the meeting! A record for this location! Included was JIM DEBOTH's TESLA ROADSTER!!! What a sweet car that is!

## Outreach

Rich Hirschberg

Great EV Outreach Opportunity Coming Up!

On Saturday, October 24th, **Nanners Restaurant** in South Elgin is having their grand opening. They are on Randall Road – a major thoroughfare up and down the Fox Valley.

Yes, it may be a burger joint, but their food is way better than the usual burger & Coke place. AND before you prejudge them, they aren't your typical ICE car hangout.

I've been in there and when the conversation comes around to cars, I naturally talk about our club and all the member's EVs - the electric dragster, the e-Porsche, Ted's Tonka truck, the Big Cheese Wedge, the eRX-7, the Electric Bug, the Prius PHEV, and on and on...

They are impressed enough that they'd love to see a few EVs in person. So I figured that during their grand opening with zillions of people there, we'd get lots of attention with the EVs... and the usual Q & A. This **COULD** be a great outreach opportunity for us to help us spread the EV grin (and the word). The newspapers may be there for a good photo op.

There is going to be lots of other activities to draw people in as well. The restaurant owners want to insure a big audience so they are pulling out all the stops. And they especially want to give back to the community. They were telling me about some of the charities that want to share that days proceeds with.

Opp charge - I can try to line up if need be. Please RSVP to me your interest. I am especially hoping for any EVs in the Fox Valley area (Elgin, St. Charles, etc.) but all are welcome. Things will be starting for us around 5 pm and will go until 9-ish. I hope lots of you can make it. Call me or email me with questions - Rich Hirschberg, [GoAFVs@yahoo.com](mailto:GoAFVs@yahoo.com), 847.628.2065 (w).

## Current Conversions

Nathan Stowe

**Paul Schile's '94 Saturn SC2:** Paul is currently converting a '94 Saturn SC2 to electric. His comments on the conversion and EV's in general are below:

I have been interested in EVs for a while, ever since a former professor of mine --Rodney Bohlmann -- built one in the early 90's. I'm doing it because I have always wanted to and talked about it a lot. My friend told me to "put up or shut up" and we made a \$500 bet that I would do it in 2 years. That was 23 months ago and time is running out. I bought my donor in the Summer of 2008 and I got the motor in May/June when the prices dropped. I had been given the Curtis 1231C controller (the one Ted was using for a while) by the guy who had Doc Bohlmann's old car, Sparky.

I have worked on cars for a while, rebuilding engines and the like. I wasn't daunted by the mechanics of the conversion, although some of the custom fabrication had me a little worried. Money has been an issue and so I haven't been able to spend any for other people

to fabricate, except for a couple of key precision pieces, for lining up the motor and transmission. I got all of the aluminum, including my 3/4" plate from the scrap pile. I have used 4/0, 3/0 and some 2/0 welding cable and saved a ton there. I'm going to make my own crimped ends with scrap copper pipe.

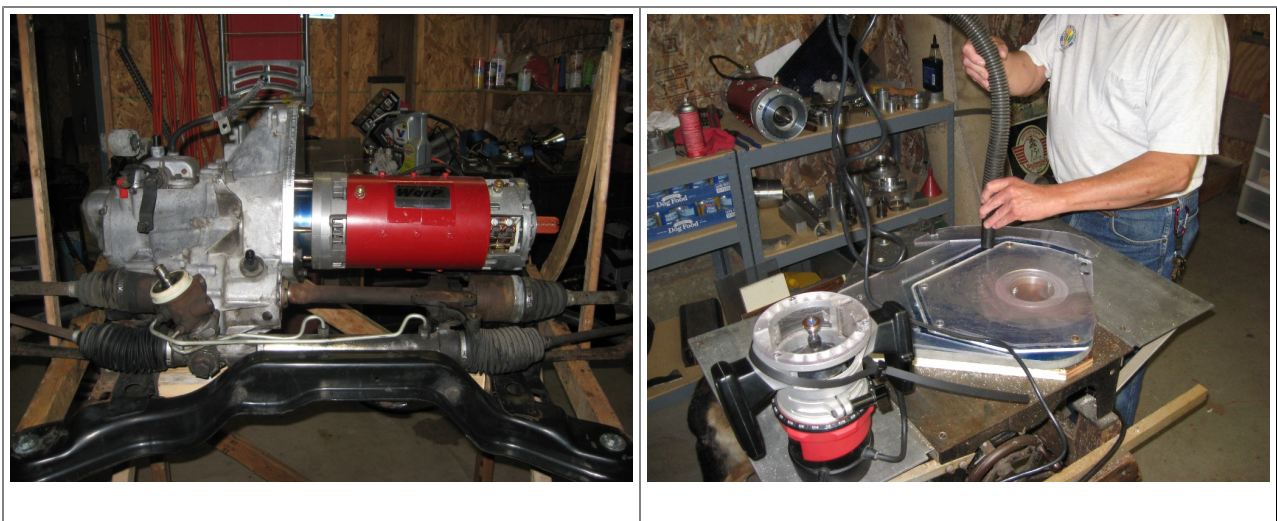
If anyone has a used throttle box I am very interested. I'll need to buy new fuses and contactors. I'm going to use an extra yellow top as my accessory battery to start. (I figure I'd need another battery in the main pack to make up for the power feeding the DC/DC converter, so why not just charge an extra battery?) I got discount 25 Amp chargers from Sam's club (I still have a few spares if anyone is interested for \$25.)

I have done this whole thing on a shoestring budget. I haven't compromised on quality but I did a lot of the work myself, the hard way with simple tools. By the time I am done and get it running to win my bet I will still not have spend \$5000. Once I know it is all working I will start spending on a BMS or more batteries to get up to \$5000. I'm not dumb enough to throw an 80% discount away! (Referencing the rebate from IL) I might even buy a new controller and sell my donated one.

As you can see I dropped the whole engine cradle out of the car to do the work on. I built a makeshift stand and I even put it on casters so I could roll it around the garage. I HIGHLY recommend doing it this way. I can't imagine what a hassle it would be to do this inside the car / under the hood. The pictures show the motor mounted to the transmission. Next up is mounting the motor end to the cradle/frame and mounting the intermediate shaft bracket to the motor. I have shown my "Mill" where I used a template to mill my 3/4" adapter plate with a standard router. It wasn't that tough, just taking small passes of about .050" or so with a carbide bit. It is also how I did the center hole using a pivot point to spin the router around.

I have an Oct 23rd deadline if I want to win a \$500 bet, so I'm pushing hard at this point. Mating the motor/transmission was a HUGE step and now that it is done I fell confident I can do it. All down hill from here...

-- Paul



**Tom Gralewicz's 1990 Dodge Neon "Electric Neon":** Tom is working on a conversion of

his Neon to AC drive. There will be more on Tom's conversion next month, but you can check it out at the EV Album <http://evalbum.com/2441>. It looks like Tom is also the ultimate recycle-er, re-using many parts.

Send the details of your conversion and contact information to [editor@fveaa.org](mailto:editor@fveaa.org)

## Membership Update

*Ted Lowe*

We're **193 members strong**, with 2 new members this month! **A BIG WELCOME** to:

Andrew Alper - Chicago, IL

Bil Becker, Aerotecture International, Inc. -  
Chicago, IL

**A lot of member's renewal dates are 10/31/2009. Please renew all!**



## FVEAA Membership Report

as of 2009-10-14 12:14:03

### Count of Members by Type

Membership Type	Count	Paid Up
BusinessCharter	1	1
BusinessStd	6	6
Family	22	21
Individual	161	154
LifetimeInd	3	3
Totals	193	185

### Other Statistics

Statistic	Value
% Paid Up	95.9%
Avg. Paid Up Days	111.6 days
% With Email	91.7%

## Newsletter

*Nathan Stowe*

Please send submissions to Nathan at [editor@fveaa.org](mailto:editor@fveaa.org). The deadline is the the first Friday of the month. If you are a member selling your EV, we will run the ad free of charge. Please add [editor@fveaa.org](mailto:editor@fveaa.org) address to your address book, or the allowed list in your spam filter.

**FVEAA Membership Application:** Please make your check payable to "FVEAA" and postal mail it with this membership application form to the return address on the top of the newsletter "Attn: Membership", or bring this to the next meeting.

<p>Name: _____</p> <p>Address: _____</p> <p>City, State Zipcode: _____</p> <p>Phone: _____ Type: Home/Work/Cell</p> <p>Email: _____</p> <p>Please check one:    New Member _____ Renewal _____</p> <p>How did you hear about the FVEAA ? _____</p>	<p><b>Membership Type</b>            Circle one:            Individual \$15            Family \$20            Business \$100            Premier Bus. \$250            Charter Bus. \$500</p> <p><b>Newsletter Option</b>            Circle One:            None +\$0            Email +\$0            Postal Mail +\$15            Both +\$15</p>
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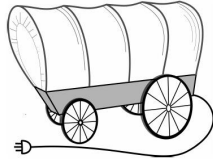
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ComEd is proud to sponsor FVEAA.



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