

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

Meeting: Friday, January 18th

Doors open at 6:30PM, **Meeting starts at 7:00PM**

Packer Engineering

1976 N Washington St,
Naperville, IL 60563

Directions: Packer Engineering is the on 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.

January 2008 Newsletter



Fox Valley Electric Auto Association

A Not-For-Profit Illinois corporation and the Chicago area chapter of the Electric Auto Association

Meeting Agenda

Call to Order and Introductions

Approval of Minutes

Treasurer's Report

Old Business

- Committee Announcements and Updates
- Group Picture 2008
- Ed Harris Generator Auction

New Business

- Ed Meyer's Vanguard EV Donation
- Anyone have anything else?

Intermission - EV Viewing, Networking, Refreshments, Raffle Tickets!

Raffle Winners

Show/Tell/Ask - Anyone can show/tell/ask something EV-related for 2 minutes.

Program

Chris Tolbert and his EV Challenge team from West Wilkes High School in North Carolina will speak about and demonstrate their EV project. We will pull their EV into the first floor garage area so we can view it and ask questions without freezing our &^%\$ off! Learn more about their project [here](#) and the EV Challenge [here](#).

President's Words - \$100/barrel ... \$4/gallon here we come?

Ted Lowe



Humans seem to pay more attention to round numbers. Like birthdays that are an even multiple of ten. Or a year that is a multiple 1000 (ie, Y2k). Merchants sell their wares for xx.99 instead of the next whole number to "trick" us. Even though \$2.99 is just a cent shy of 3 bucks, it seems psychologically significant. Last week, oil traded over the \$100/barrel mark. Do we get used to \$100 and brace ourselves for \$110 ? Or \$200 ? For years, people have been talking about what 'hundred dollar a barrel oil' would mean to us and the US. We've arrived. What's next? Our president George W. Bush is currently in Saudi Arabia staying in King Abdullah's million dollar tent. Among other things, President Bush is begging (err asking) the King to influence OPEC to increase production so the US economy doesn't go into a recession. Even if OPEC does raise production, say 2M Barrels/day, it wouldn't really lower the price much at all. If you had liquid gold that everyone needs/wants, why would you lower your price? Why would you sell your goods for less than the market warrants ? President Bush is trying to sweeten the pot using currency better than the US\$, a weapons deal. Of course, Saudi Arabia needs more weapons because their neighbor Iran is a huge threat to the region and world. Egads.... is this for real? Who is living the fantasy here? Us EVERS aka "treehugger freaks" learning how to use energy more efficiently and detaching ourselves from an oil-addiction? Or the world "leaders" thinking that we don't see through their plans to keep us addicted? We know their plans are about as transparent as a big black barrel of oil! Geeshh...

With gasoline above \$3/gallon in mid-January, i'm sticking to my "\$4/gallon by early spring" prediction. Sure am glad i'm not buying that stuff :-) Join me/us to drive electric! Let us know how we can best help you to drive electric!

Minutes from December 21, 2007 FVEAA Meeting

Rich Carroll

Call to order at 7:09pm by Ted Lowe. There were nine new members. Ted proposed introducing only two groups due to time constraints: New visitors, and those who had finished their EV conversion in the last 30 days. Members of each group introduced themselves. New visitors who attended wer given brochures from the 2006 Alternate Fuel Vehicle Expo.

Ted Lowe discussed available books and DVD's of interest to those converting cars to EV's. Ed Harris donated a high power Honda generator to the FVEAA. An Escort EV was also donated to the FVEAA. IN addition, three Power-Chek regulators were donated to the FVEAA by the speaker from the prior month, these retail at \$60 or %70 each. The board will decide how these can be best distributed.

Ted announced that he had set a goal to have 200 members by the end of 2008; there are 127 members as of the meeting.

Todd Martin has been working on a kit for Public Relations and we have started publicity binders that can be used.

Ted announced the FVEAA'er of the month, not so much for a single month achievement, but for a long achievement over a period of time, in reality a lifetime achievement award, and this was awarded to Kevin Zak.

Ken Adomaitis, our newest business member is a premier member. Ken's company is Eco-Conversions, focusing on electric conversions of luxury automobiles, such as the BMW 8-Series. Eco-conversions has partnered with eVionyx, an American company that has developed nickel-zinc rechargeable batteries which can handle over 2000 cycles at 90% DoD. The eVionyx nickel-zinc battery has superior performance as compared to other battery technologies available today.

A new source for \$1 per watt solar panels, NanoSolar was mentioned, see the forums.

Todd Martin is chair of the infrastructure and charging committee, but was absent.

Todd Dore is the chair of Legislative affairs. He discussed having a political candidate address the group. one who is running for Dennis Hastert's district, and would speak on EV and Truck licensing issues and also on NEV's. It was also noted that perhaps we should be pre-emptive to avoid road use taxes for alternative fuel vehicles. If we couldn't be pre-emptive, we should stay abreast of the issue.

The IT committee was represented by Ted Lowe. Ted announced that all the mailing list functions have been removed from Yahoo! and are done on our own server.

Ken Simmerman discussed charging connections, noting that a box to connect an Avcon charging head to a 220 plug would be a handy thing to have for some EV'ers.

The raffle was announced, and included books, "The Oil Factor", "Plug-In Hybrids" and "Charging Ahead".

We started a break at 8:24pm and returned with a reconvene time of 8:52pm. Raffle winners were announced and a tidy \$31 profit was added to the treasury. At this time, Dale Corel gave the treasurer's report. Before he was handed the raffle money, he reported \$xxxx in checking and \$xxxx in savings.

Initially it was considered to auction the Honda generaotr to those present, but after discussion, it was decided that we should publicize the auction to all members with pictures and a description of the unit in the next newsletter. It was moved and seconded to add this auction to the January agenda. Carried.

Several people spoke up for show and tell. Todd Dore discussed welding, and some of the trials he had in welding on his recent EV. George Gladic presneted a Prius battery, most members had not actually seen one. Also discussed were hot water heaters and heaters for EV's.

Our featured speaker was Tom Erekson who is the Dean of Business and Technology of Western Illinois University at McComb. He previously served as dean of the College of Technology at Bowling Green State University for seven years. He discussed several programs from EVI and Brigham Young that had involved their students in electric racing and product development.

Porsche 944 Club Car Rolls Down The Road!

Ted Lowe



After about 6 months of Saturdays, we took the 944 for test drives last Saturday! It is a fun and peppy car as we expected. We overindulged on the new batteries and ran them empty (NOT a good thing to do on a new battery pack). Our EV grins got the better of us!

Eric extends his sincere gratitude to all the FVEAAers involved as well as I do! We have collaborated well on an excellent conversion, each one of us adding our unique blend of ideas and skills! JOB WELL (ALMOST) DONE FOLKS!

One issue with the new after market rear shocks was identified (which caused some loud metal-on-metal sounds when going over bumps).

Eric is filing the application for the \$4,000 EV Conversion Rebate this week, and word is from Springfield that we can expect the rebate check about June.

We have four primary efforts remaining:



- 1) Installation of liquid-based heater system
- 2) Design and implementation of an RPM sensor to send readings to the Raptor controller (for max-RPM limiting) and to the Tachometer in the dash.
- 3) Complete and cleanup wiring inside the car and under the hood.
- 4) Install charging inlet (that Terry Kane and son have designed and built).

Come on out and see the project before it's too late! Many good times are happening and much is being learned!



Ted Sanders gives his test ride a big thumbs up!

Ted's EV Grin!

Support Our Sponsors That Support Us

Ted Lowe

Visit our Sponsors page to view their information: <http://www.fveaa.org/sponsors>

Pay their support forward by visiting their websites and seeing what services and products they offer!

Everyone please ramp up your recruiting efforts for new business memberships and if your business is relevant to FVEAA's mission, we'd gratefully appreciate your support as well! See more information at: <http://www.fveaa.org/join>

Donated Generator To Be Auctioned At January Meeting

Ted Lowe

Ed Harris donated a high-quality used Honda E2500 generator to the FVEAA. The generator is about 10 years old but still works with a simple modification to work around a broken part (magneto). He just replaced this generator with a new similar model that costs over \$1,500. He thinks the generator is worth \$100-200.

Thanks go out to Todd Dore for bringing the generator to the December meeting for our inspection. We decided to auction it at the January FVEAA meeting with the funds raised going into the FVEAA coffers. If you want to bid but won't be at the meeting, let me know and i'll bid on your behalf.

The E2500 puts out 2KVA @ 115 V AC and 8.3A at 12V DC. Here is a 35 page owners manual for your perusal: <http://www.manualguide.com/dl/1415>



FVEAA's Charter Business Member

Ted Lowe

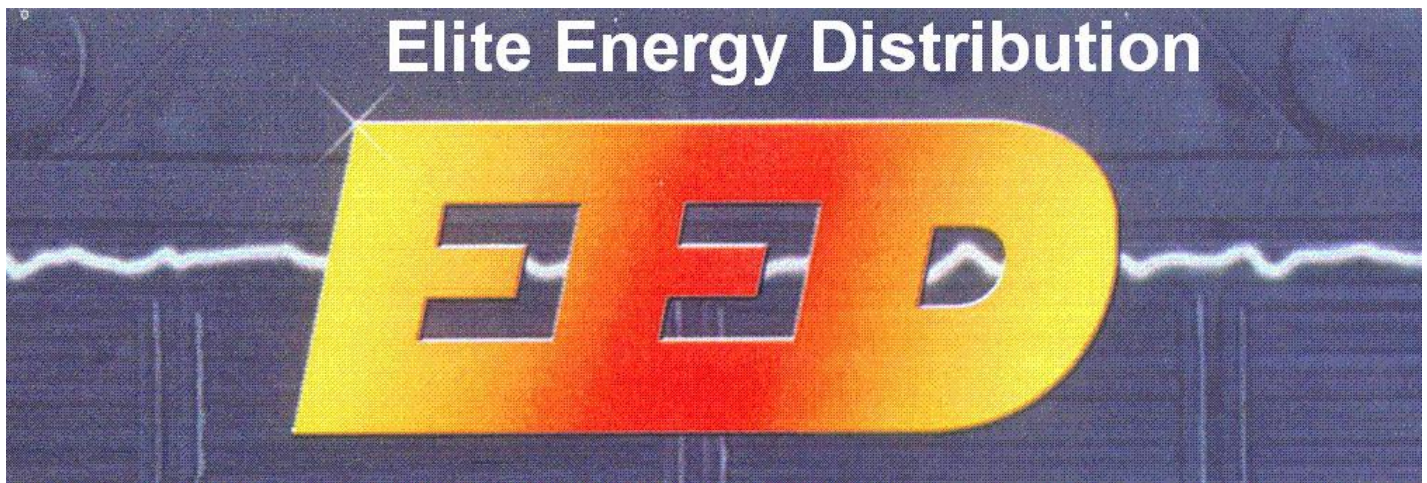
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Carroll's Corner

Rich Carroll

It seems that success in the EV conversion industry can be best attained by having success in a couple of minor areas. One of the critical areas is in the selection of components. You need to choose a high enough voltage to produce reasonable acceleration for your choice of vehicle, and you need to have the proper components to adequately deal with the higher voltage. After some consideration, I found that few successful EV's worked on less than 120 volts. 120 or 144 volts is about the absolute minimum to produce a car that can keep up with traffic and use any/all roads found in today's environment.

The next area for success is in battery management. There seem to be lots of thoughts on battery management, some in the charging system, some in balancing battery voltage, etc. I have asked people for a couple of years what system is actually working. Some folks have suggested that this or that WILL work. Curious, but they all sound like they will work, but what about the newer battery technology? Will the battery equalization systems work for NiMH, for LiIon, or for LiPoly? These are relative unknowns. There seem to be lots of good ideas, but few proven practical vehicles with working balancing systems. The Rudman Regulator is a well known method of battery balancing, and isn't the most efficient design, but it does seem to work. When set up correctly, it seems to be the most reliable. It is the system folks go to when they don't want to have to deal with the bugs from a new system.

Are the Rudman units the "best" design? I would argue that they are. They are proven. Yes, they work by shunting the highest voltage battery down to the common voltage, and this is inherently inefficient, but they do work and seem to work reliably well. I am still taking suggestions as I build my EV, but I have decided to try the Rudman's even before I decide on a battery technology. I am leaning toward the NiMH batteries, as they do offer the range/weight I need, but still haven't accepted the steep purchase price. I'm still thinking, so stop me at the meeting or drop me a line with your thoughts.

FVEAA's Premier Business Member

Ted Lowe



Eco-conversions

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eco-conversions

Eco-conversions specializes in converting oil dependent vehicles to electric. Focusing specifically on luxury vehicles, our goal is to shatter the image of the traditional electric car.

Even though all high-end, luxury and luxury sports car conversions are acceptable, our benchmark vehicle is the BMW 8-Series. It is the perfect marriage of style, luxury and performance. At eco-conversions we work hard to show that it is possible to create another choice for the environmentally conscience consumer. By using environmentally friendly nickel-zinc batteries, we provide enough power to maintain both the feel and performance of a luxury sports car. Each charge provides 100+ miles of drive time. No gas required. Zero emissions. The end result is a luxury vehicle that you can feel good about driving.

Eco-conversions has partnered with eVionyx, an American company that has developed nickel-zinc rechargeable batteries which can handle over 2000 cycles at 90% DoD. The eVionyx nickel-zinc battery has superior performance as compared to other battery technologies available today. The nickel-zinc cells are superior to lead acid in total power and energy, specific power and energy, and recharge time. It is less expensive and also performs better than NiMH cells. NiZn batteries are particularly suited to high-power applications, such as use in electric vehicles and light transportation.

Ed Meyer Donates Late Model Sebring-Vanguard EV to FVEAA

Ted Lowe

Ed Meyer has decided to part with his Vanguard and to generously donate it to FVEAA! About 2500 or so of these were built in the mid-70's during the first oil embargo, just about the time that the FVEAA was starting up. By today's standards, this EV would probably be considered an NEV (but is EV licensed to drive on the roads now). The best way to become familiar with the Vanguard is probably to peruse their listings in the EV Album: <http://www.evalbum.com/type/SEBV>

Ed recently shared a lot of detail about his EV with me and I will write it up for the February newsletter. I suggest we hold an auction for Ed's EV at the March meeting. This will allow us time to get the word out to all members and understand more about the EV. Thanks Ed!



Newsletter Publishing Schedule

Ted Lowe

Again this month, we missed our Bylaws stipulated deadline of publishing this newsletter by the Friday before the monthly meeting.

Newsletter Editor Rich Carroll and I are still working out the kinks in collaborating on the newsletter and fitting the new schedule of this task into our busy lives.

You can help us by **submitting content** for this newsletter by the **Wednesday before the 2nd Friday of the month!** This will give us enough time to finish up the newsletter and get it out by 7pm on the 2nd Friday of the month per our Bylaws. **Thanks!**

Local Government Now Using EVs *Rich Carroll*

The largest governmental purchase ever of Miles EV ZX40's was just completed by the Metropolitan Water Reclamation District (MWRD) of Greater Chicago. They purchased 30 ZX40 models from Miles Electric Vehicles.



The ZX40 is a low speed small SUV powered by four AGM batteries, giving a 48 volt system. Claimed range is 40-50 miles and, since the ZX40 is classified as a LSV (low speed vehicle) it is limited to 25 miles an hour.

Unlike open chassis, "golf cart-like" electric vehicles, the Miles ZX40 (a four-door, four-seat hatchback or SUV model) is built on an all-steel car chassis and offers features like AM/FM sound systems, power mirrors, and available air conditioning.

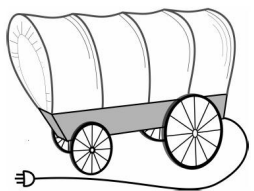
The MWRD is responsible for maintaining the main waterways and 1,300 streams within an 883-square-mile zone that includes

the city of Chicago and 129 suburban municipalities. It also owns and controls more than 25,000 acres within four metro counties. If the District were a state, it would be the 21st most populous state in the country, right between Minnesota and Colorado. On average, its seven facilities treat a flow of 1.2 billion gallons of wastewater per day.

I find it curious that a local government agency purchases 30 EV's and it hardly makes the local papers.

FVEAA's Business Members *Ted Lowe*

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1985 Escort EV NOT Donated To FVEAA

Ted Lowe

Unfortunately, Rodney Bohlmann donated his 1985 Escort EV to "someone else in Galena that wanted it". I understood that we were to receive it, but perhaps the schedule very close to Christmas didn't work out for us to take advantage of this offer. Lesson learned for next time!

Welcome New FVEAAers

Ted Lowe

Let's give a big FVEAA welcome to the following new members:

Rita Maniotis, Berwyn
Thomas Erekson, Macomb

Rick Gurolnick, Hawthorn Woods
Matt Kenigson, Aurora

Welcome aboard Folks! Let us know what we can do to help you in your EV pursuits!

Heated Seats Provide Warmest Winter Driving EVER!

Ted Lowe

Many thanks to Jim Dawson for 1) introducing the FVEAA to heated seats, 2) arranging a group purchase for us all, and 3) demonstrating their installation!

I finally installed the heaters i bought from Jim last March and have had the warmest winter driving experiences EVER! So far, i've set them to high at the beginning of the drive, but find i have to set them to low because they get **too** warm! [Here's a YouTube THANKS to Jim!](#)



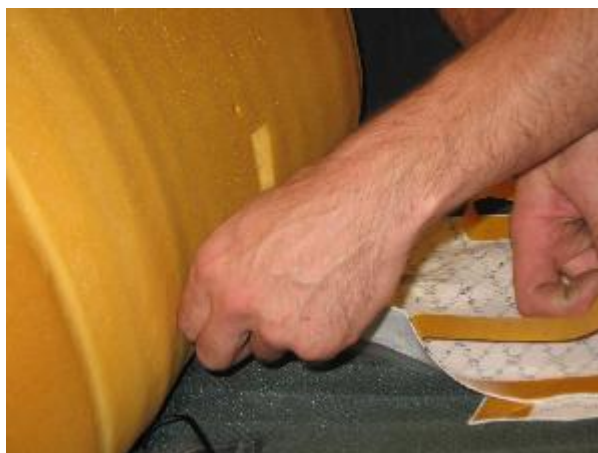
Seat ready for Jim's installation demo!



Jim begins by removing the hog rings holding the cover on.



Cover peeled back, prepare to install heater. Cut out some foam to inlay thermostat.





Upper heaters installed, put cover back on.



Reinstalling hog rings is easier with a special tool.



Wiring harness installed underneath seat.



Perfect spot (as Jim suggested) to install high-low switch.

FVEAA Membership Report

Ted Lowe



FVEAA Membership Report

as of 2008-01-15 04:58:03

Count of Members by Type

| Membership Type | Count | Paid Up |
|-----------------|-------|---------|
| BusinessCharter | 1 | 1 |
| BusinessPremier | 1 | 1 |
| BusinessStd | 2 | 2 |
| Family | 14 | 14 |
| Individual | 114 | 114 |
| LifetimeInd | 3 | 3 |
| Totals | 135 | 135 |

Other Statistics

| Statistic | Value |
|-------------------|------------|
| % Paid Up | 100.0% |
| Avg. Paid Up Days | 302.6 days |
| % With Email | 90.4% |