

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

**Return Service Requested**



## **August 2011 FVEAA Newsletter**

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

### **Next Meeting**

**Friday, August 19th, 2011 - 7:00PM (doors open at 6:30PM) at  
Packer Engineering, 1976 N Washington St, Naperville, IL 60563**

**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.**

### **Agenda**

- Call To Order
- Old Business
- Committee Reports
- New Business
- Nominations for FVEAA Elections
- Before Intermission Program: John Emde - Porsche Boxster
- Intermission: Refreshments, Networking and EV Viewing.
- Program:
  - Rich Carroll - First Responders Presentation

### **President's Words**

*Rich Carroll*

### **Program for August**

John Emde will discuss a recent conversion, a LiFePO<sub>4</sub> Porsche Boxster. He will give a short presentation right before break, and then move to downstairs and he will be available with the Porsche for questions/discussions. I plan to present an overview of a program I am developing for First Responders.

### **First Responders**

While the Pioneer Conversions shop is in unincorporated Will County (7% sales tax, thank you), we are served by the Lemont Fire Protection District. They do annual inspections of every commercial building, checking for fire extinguishers, emergency lighting, appropriate signs, and any hazardous situation. As with most fire departments, their obvious interest is in keeping us safe, not writing up defects. At our last inspection (and they do look at the cars in detail) they mentioned that they had few resources for training First Responders to handle situations with electric vehicles. After a short discussion, I talked to George Rimbo, a Battalion Chief and Training and Safety Officer for the District. George wanted me to talk to the First Responders in the District. This includes Firefighters, EMT's and Police. They do have some access to ERG's (Emergency Response Guides), which are available from major manufacturers. These are a guide to very specific car models, which tell the First Responder where the hazards in the car are, where to cut the car open if an extraction is needed, where the fuel is stored, etc. However, they have no comprehensive guide or plan that they could use in a car that is not listed, nor a good overview of EV's.

With well more than a dozen models of EV's coming from manufacturers in the next year, First Responders will really be presented with a potentially overwhelming amount of information from several sources. I offered to talk about EV conversions, and attempt to generate some better general rules for First Responders when they encounter an EV. Due to the Firefighter's schedule of 24 hours on, 48 hours off, I agreed to present the program three different times, at the same time each week for three weeks, so as to be able to cover almost every person. We have now established a link, so that the program is shared with the Police Department, in audio and visual, so that we can include those FR's. They offered to tape the program for anyone unable to be present. I have done one of the three presentations, and will have done a second before the club meeting.

I would like to post the finished program on the FVEAA website for anyone to download. I would encourage all members to present this to their local fire department. They may well offer you a small honorarium (likely in the \$100 range) for your time and effort. You can approach the honorarium in any way you wish. It is taxable income if you record it, but for small amounts, they won't make any tax deductions or even record your SS number. In my case, I declined the honorarium, and wanted to foster a cooperative atmosphere.

I'll share my Impress - PowerPoint presentation with you at the meeting. I know I will be 'preaching to the choir' so we'll breeze through the areas about how the EV's are coming. We'll focus on what is currently available to FR, and what they need to know in a general sense, and how to distill all the (sometimes kind of poor) information available to them. By the end of the meeting, you will be able to see why we need some expert compilation of the ERG's and MSDS sheets of the world. (and some suggestions on how to keep it updated.) Some of these ERG's are well done, but an ERG from a different manufacturer shows how much they still need to learn. Some MSDS sheets are woefully incomplete, and this is what the FR uses if a battery is broken open. I don't expect all FVEAA members to be chemical experts, but I hope we can realize how much input is still needed from the EV community.

### **Biggert Bill**

Representative Judy Biggert (R-IL13) has introduced HR 1685 into the US Congress. I fully expect this bill to affect us in several areas. Titled as, "The Electric Drive Vehicle Deployment Act of 2011," the bill has several functions.

One part seeks to establish up to ten zones or 'deployment communities.' These might be states, Indian tribes, local governments, or a combination of these. Zones would be required, in order to qualify for the federal funds, to provide a minimum of \$2,000 in benefits to the first 50,000 consumers in the zone to purchase electric vehicles. Doing simple math indicates that each zone must provide at least \$100,000,000 in benefits (likely incentives) spread across at least the first 50,000 EV purchasers in the Deployment Zone.

The second part of the program seeks to provide financial assistance to MUNICIPALITIES not in the selected Enterprise Zones. One major thrust of the second part is to fund the installation of publicly available EV charging infrastructure in that municipality. This program is a competitive program for municipalities.

The bill would amend the IRS code to extend the tax credit for EV charging and allows a tax credit for EV refueling property bonds. It directs states and utilities to establish protocols and standards for EV charging rollout and allows for vehicle identification and association with the owner's electric utility account.

The bill also establishes a loan program to manufacturers of EV components and EV charging equipment. 25% of these loans will go to small manufacturers with less than 500 employees. It also directs the General Services Administration (GSA) to purchase 1000 vehicles and the infrastructure to charge them.

- - - - -

This Targeted Electric Drive Vehicles Deployment Communities Program has a ways to go, first being referred to several committees:

[House Energy and Commerce](#)  
[House Energy and Commerce, Subcommittee on Energy and Power](#)  
[House Transportation and Infrastructure](#)  
[House Transportation and Infrastructure, Subcommittee on Highways and Transit](#)  
[House Oversight and Government Reform](#)  
[House Oversight and Government Reform, Subcommittee on Technology, Information Policy, Intergovernmental Relations and Procurement Reform](#)  
[House Ways and Means](#)  
[House Budget](#)

Assuming it passes out of these committees, the US House of Representatives will vote, and, if approved, send it on to the Senate. Senate committees will review the bill, and likely send it on to the full US Senate. If it passes both the House and Senate, it goes to the desk of the President for signature. The full text of the current version of the bill is at: <http://www.govtrack.us/congress/billtext.xpd?bill=h112-1685>

BTW, If you chose to follow legislation, GovTrack.us has some excellent services. You can set up 'trackers' to allow you to receive notice about a particular subject, a particular legislator, or about particular bill(s). My tracker for HR 1685 includes all major activity on this bill and any and all amendments, all references in the Congressional Record, and all relevant upcoming committee meetings. This is a really simple way to get involved with issues that will directly affect you, and allow you to call/write your elected officials and let them know your thoughts/opinions.

## **FVEAA Elections**

August start the election process in FVEAA. Nominations will be opened at the August Meeting for seven positions in FVEAA: President, Vice President, Secretary, Treasurer, and three Board Member positions. Nominations will be open until the September meeting, and we will have elections at the September meeting. Our September meeting is technically our Annual Meeting, and the elected officers will be installed. Sometimes we don't put enough thought into these elections, hoping that the people who have been nominated are going to represent our interests perfectly. As a practical matter, I know that each of the current officers have the best interests of the club at heart, but there is some slight variance in the specifics. I would encourage you talk to your fellow FVEAA members and choose by nomination and election, the folks who will guide the club in the direction that you want.

## **Creative Opportunities for Charging Stations**

I received a couple of press releases this month, explaining how Carbon Day Automotive has been active in adding new charging stations to its network. It is fairly obvious to me that the charging station rollout by 350Green is going well, but their installation of chargers

is not the only game in town. Carbon Day Automotive has seized on the opportunity of promoting chargers to places that could not interest 350Green. As you will remember, Hali Settig from 350Green visited us last month to discuss in some detail their planned rollout. When 350Green was first announced as the winning bidder for the initial CEVC charging station rollout, several people expressed the idea that the existing charging station sellers would be in trouble competing against 350Green. After all 350Green gives their chargers to the property owner at no charge, how can you sell a multi-thousand dollar charger, when your competitor is giving them away.

It turns out that there are several areas where the 350Green/CEVC program won't work. These are nicely being covered by the Coulomb Technologies and Get Plugging and other vendors. How can they do that" They aim at the areas where CEVC can't compete:

Those areas include:

- Personal chargers, on private property, for the use of the property owner/tenant only
- Inside parking garages, accessible only to paid parkers
- Businesses that do not want to make the charger available 24/7, perhaps from a security standpoint
- Employers who want to offer their employees a place to park in the company lot and give their employees free charging or a discounted rate
- Businesses that need to valet cars
- Car Dealers who want to put the charging equipment inside, or behind a lock
- Businesses that do not want the higher cost of the 350Green plan passed on to their customers
- Stores that want to have the ability to use the charging station as a promotion. (Free or discount charge if you purchase \$25 worth of merchandise)(This can be seasonal or not)

These, and other areas, allow the charging stations to be put where the CEVC cannot compete. Don't hesitate to ask your employer to install a charging station in the employee parking lot, and make it available at a low cost (or free) as an incentive to start up this worthy cause. I asked mine.

## **Meeting Minutes - July 2011**

*Bruce Jones*

President Rich Carroll opened the meeting at 7:03 p.m. and everyone introduced themselves. The sign-in sheet was passed around and Rich described the awesome door prizes.

### **CEVC**

The Chicago Electric Vehicle Consortium provided guidance to the City of Chicago and passed the baton to Roland Berger consulting for planning for the remaining phase. Implementation will continue per 350 Green and their representative Hali Sittig will fill us in tonight on the details.

### **COMMITTEE REPORTS**

**FINANCIAL** - George Vergara found a person in charge of 20 colleges and will ask for some funding to search for money raising activities. He is positioning the FVEAA as a dispenser of EV information.

**CHARGING INFRASTRUCTURE** - No news

**OUTREACH** - Rich Hirschberg, and others mentioned several coming fairs including Oregon Aug. 13<sup>th</sup> - 14<sup>th</sup> Renewable Energy Fair at Ogle County Fairgrounds, the Car Show in Caray, Oshkosh Air Show August 25 - 31<sup>st</sup>, Midwest Green Car Expo - Elgin Sept 10<sup>th</sup> 9:00 - 3:00 which needs electric vehicles.

Dio Vesselinov mentioned North Aurora days and he will post information on the forums.

NEWSLETTER - Keith Baubkus, No news

FINANCE - Todd Dore provided an update on the finances. We're in very good shape One person signed up as a member due to our presence at the Green Festival.

ELECTRIC COMMUNICATION AND MEMBERSHIP - Ted Lowe had no news

#### SURVEY

Rich took an informal survey of the group to determine what brands of electric motors are being used in the members EVs. The answers were quite varied and included ADC , DND, JAN1,2, Warp, Impulse, GE, BND, Advanced DC, Zap etc.

OLD BUSINESS – None

#### NEW BUSINESS

Ted introduced a friend from the Las Vegas EAA

#### POTENTIOMETERS - JON EMDE

Jon Emde presented the technical aspects of potentiometers and how they operate with an electric vehicle accelerator pedal. A "0 – 5k" potentiometer senses the opening of the pedal, (we can't really call it a *gas* pedal now can we?) allowing varying amounts of electricity to be sent to the motor depending upon how far the pedal is pressed. The "pot" he showed rotates up to 270 degrees, and through the use of conductive and resistive materials in a rather small section, it varies the amount of electricity. New potentiometers usually operate as advertised, but over time, with repeated use, the materials wear down. An EV driver will then feel acceleration as jerky and not smooth. If a worn out pot is replaced, Jon recommended going with high quality potentiometers and not the inexpensive knock-offs which don't last very long. Well done Jon!

#### GEORGE GLADIC'S CONVERTED PLUG-IN HYBRID PRIUS NOW GETS 111 to 172 MPG

George documented, and described step by step the 2<sup>nd</sup> Conversion of his 2006 Prius to a plug-in hybrid. He used 158 Lithium iron phosphate batteries, for a battery pack sized around 8kWh. Batteries were purchased from Manzanita Micro.

He is using Battery Management System (BMS) purchased from the Ewert brothers, who presented their BMS system at our March 2011 meeting. (Refer to the April newsletter.) Each battery requires a dedicated positive (+) wire and dedicated negative (-) wire, back to the control system meaning George painstakingly connected 316 wires, but it was worth it. They are critical to properly equalize and maintain the health of the batteries. George insulated the battery box so the 1.7 pound batteries, wouldn't touch metal. The batteries alone cost around \$ 30 each x 160 = \$4800. Total cost of components including batteries, was \$7055. Great job George, and thanks for sharing your experiences.

Break 8:15

4 or 5 electric car downstairs

#### 350Green

Hali Sittig, is the regional manager for 350Green and she described clearly, and in excellent detail the rollout of charging stations in and around Chicago. Her background as a construction manager has greatly helped her with the challenges of installing charging stations which is not as straightforward as it might appear.

Many businesses are resistant to the chargers even when they are basically free. Charging a vehicle at home is fairly simple, but for those living in an apartment or condo it has been difficult to get owners to agree on installing units. They are installing 280 chargers in this first phase, with 73 Level 3 fast chargers and 207 level 2. And there will be 18 solar carports in conjunction with the IGO car sharing service.

It was noted that Walgreens is installing around 178 fast chargers and 574 level 2 chargers at stores in 10 major US markets. Such charging will bring early EV adopters into the stores and, by the way and keep them in the stores a bit longer.

Regarding financial arrangements, the chargers are free to the host location. Money is generated from subscriptions or membership fees, as electricity cannot just be resold. For instance an EV owner can sign up for a subscription of \$70/mo for unlimited use at any stations using the membership card. Or they can buy on an as-needed or per-use basis using a 24-hour call and take payment over the phone. She also noted that the chargers are free until September 1<sup>st</sup>, and monthly rates have been capped by the City of Chicago at \$75/mo.

Hali also discussed rollout plans, fleet management, electricity management, smart grid changing, turning off stations temporarily to save electricity and storage. She agreed to return in a few months to provide a follow up when the project has been completed. Excellent presentation Hali!

The meeting adjourned at 9:30 p.m.

The first pictures did not make the newsletter last month, but we held them over.

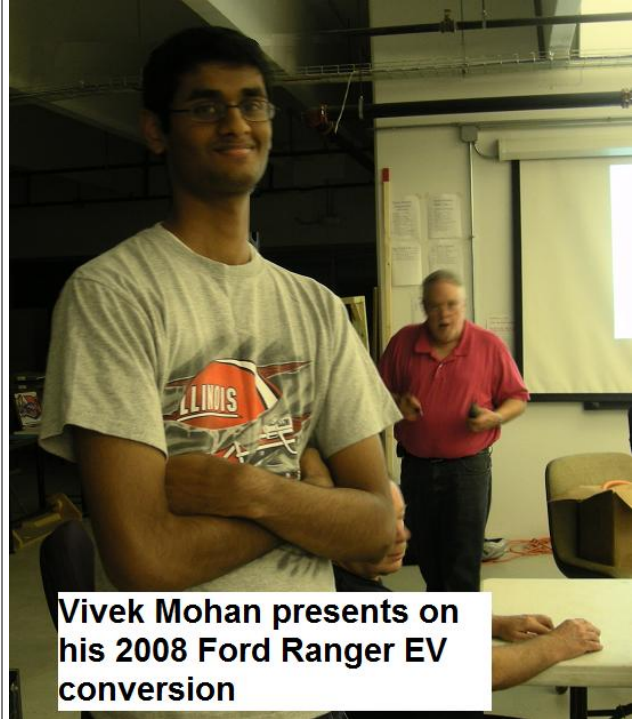


Guy Antonides checks out Scott Fauque's Chevy Volt

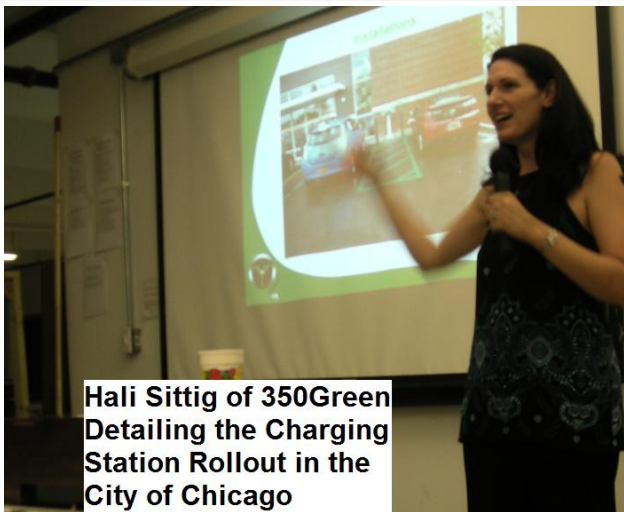


The LEAF gets a charge!

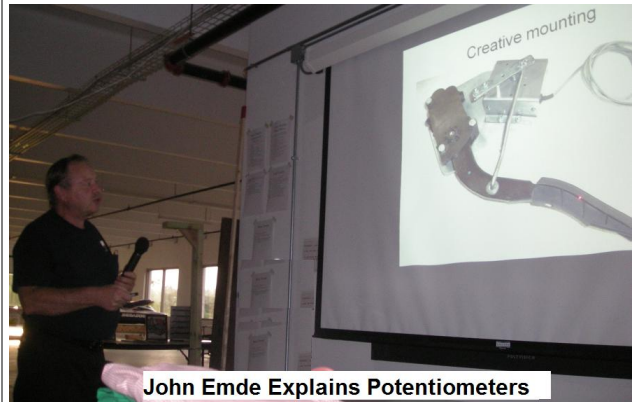
**Chuck Carrington's MG EV**



**Vivek Mohan presents on his 2008 Ford Ranger EV conversion**



**Hali Sittig of 350Green Detailing the Charging Station Rollout in the City of Chicago**



**John Emde Explains Potentiometers**

**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 ? \_\_\_\_\_

<b>Member Types and Annual Dues</b> (Please circle one)		<b>Newsletter Delivery Types</b> (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:			

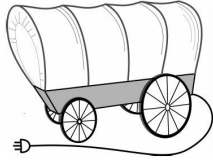
Please make your check payable to "FVEAA" and postal mail it with this membership application form to:

**FVEAA**  
**PO Box 214**  
**Wheaton, IL 60187-0214**  
Attn: Membership



## FVEEA Business Members

### Pioneer Conversions, L.L.C.



Your local **WarP** motor dealer  
Custom Electric Vehicle Conversions

[pioneerconversions.com](http://pioneerconversions.com)

12305 S. New Ave. Suite N  
Lemont, IL 60439  
(630) 243-6616

Batteries Plus  
Ed Hatteberg

## BatteriesPlus.

115 E Ogden Ave, Suite 131  
Naperville, IL 60563  
Phone: 630-355-6822  
Cell: 630-470-5700  
Fax: 630-355-6874  
Email: [batplused@yahoo.com](mailto:batplused@yahoo.com)  
Web: [www.batteriesplus.com](http://www.batteriesplus.com)

### 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.

[www.go-ev.com](http://www.go-ev.com)

900 N State St, Suite 101  
Lockport, IL 60441  
630-243-9100  
Fax: 630-685-4054

## Bob's Hillview Auto



"Good Service For A Long Time"  
Gas · Hybrid · Electric

**847-842-9543**

4c Hillview Dr.  
Lake Barrington, IL 60010 [bobshillviewauto@gmail.com](mailto:bobshillviewauto@gmail.com) Bob Baker  
Owner

**Harris Precision Tools**  
Robert Harris



10081 Anderson Ave  
Chicago Ridge, IL 60415  
Phone: 708-422-5808  
Email: [harrisprecision@comcast.net](mailto:harrisprecision@comcast.net)

**Ecological Products Company, Inc.**

Glenn Hunter  
739 N Elmwood  
Oak Park, IL 60302  
Phone: 708-445-0341  
Email: [info@illinoiselectricvehicles.com](mailto:info@illinoiselectricvehicles.com)  
Web: [www.illinoiselectricvehicles.com](http://www.illinoiselectricvehicles.com)

**Plug-In Vehicle Solutions, Inc.**  
Mike Piscitelli



**PLUG-IN**  
VEHICLE SOLUTIONS

1104 Coventry Circle  
Glendale Heights, IL 60139  
Cell: 630-248-8810  
Email: [mpiscitelli@getplugging.com](mailto:mpiscitelli@getplugging.com)  
Web: [www.getplugging.com](http://www.getplugging.com)

**Carbon Day and Carbon Day Automotive**

Brian Levin  
Cell 847 903 6652



Email: [brianl@carboday.com](mailto:brianl@carboday.com)  
Web: [carbodayautomotive.com](http://carbodayautomotive.com)