

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

Return Service Requested



June 2012 FVEAA Newsletter

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

Note: New Meeting Place!

Next Meeting

Friday, June 15th, 2012 - 7:00 PM to 9:15 PM

**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 again 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.
(note allow extra time due to road construction)**

The speaker is Judy Biggert, the Republican U.S. Representative for Illinois's 13th congressional district, serving since 1999. She will be speaking on the status of her legislation HR 1685, the Electric Vehicle Deployment Act and related electric vehicle topics.

NOTE DATE, DAY, TIME, AND LOCATION

Directions to Community Christian Church in Naperville: <http://maps.google.com/maps?q=1635+Emerson+Lane+Naperville+Illinois>

Agenda

- Call To Order
- Welcome
- Program: Judy Biggert, U.S. Congressional Representative from Illinois
- Intermission: Refreshments, Networking and EV Viewing
- Old Business
- Committee Reports
- New Business
- How to navigate the FVEAA web site
- <Board Meeting>

President's Words

Bruce Jones

Hi EVeryone,

We had a great turnout in May with at least 60 attendees to see our electric bike meeting and then hear Dr. Said Al-Hallaj Ph.D. co-founder, Chairman and CEO of All Cell Technologies talk about battery technologies and his phase change material (PCM) thermal management systems. Many thanks to Dennis Doney, Ted Lowe, and a third visitor who brought their electric bikes!

THIS MONTH' SPEAKER !!

Congressional representative Judy Biggert will talk about status of her submitted legislation, H.R. 1685, the Electric Vehicle deployment Act of 2011 which is meant to establish programs to accelerate, provide incentives for, and examine the challenges and opportunities associated with the deployment of electric drive vehicles, and other purposes.

Note if you purchase an electric car this year, you are still eligible for a \$7500 federal tax credit and \$4000 state of Illinois EPA rebate. Good sites to check are

<http://www.illinoisgreenfleets.org/fuels/index.html>
and http://www.greencarreports.com/news/1074184_its-tax-time-have-you-filed-for-your-green-car-credits

LOCATION: This month we'll again be at Community Christian Church.

Hope to see you all there!

Thanks
Bruce Jones
President FVEAA

Photos

Dr. Said Al-Hallaj president of All Cell Technologies, and Chicago Magazine entrepreneur of the year



Jenny Hansen our temp secretary, standing next to her (and husband Marty's) VOLT!



Community Christian Church in Naperville. At this upcoming meeting, for those who want to charge their PEV, drive up onto the sidewalk (YES onto the sidewalk!) and plug into one of the 120 VAC outlets <approximate locations shown.>



Members Ted Lowe, a visitor, and Dennis Doney show their different kinds of electric bikes



FVEAA meeting in the little theater at Community Christian Church

Below, is Dennis Doney talking about his electric bike. We had a good 60 members at the meeting



VOLT & LEAF!



Rich's Ramblings

Rich Carroll

As the Lightning Electric Car stopped by Pioneer (see: http://www.pioneerconversions.com/gallery2/main.php?g2_itemId=19)



I pondered the difficulties in registering a 'custom made' vehicle. Mark Kalish is the President of EnviroTech, and the creator of the Lightning

Electric Car. The Lightning Electric Car is loosely (very loosely) based on a Model T. The body work is completely custom, but the cowl is the general shape of a 23 Model T in some places, a 27 in others. All of the rest of the car is a custom, manufactured creation. It is gorgeous, but it is easier to license in Wisconsin than Illinois. Illinois law has stringent requirements, likely one of the most stringent of any state. They were using National Street Rod Association inspectors, and the NSRA checklist, but that has run into a problem. I know of several enthusiasts who were building their own custom vehicle, some electric powered, some gasoline powered, and all have temporarily stopped their build until this gets settled.

In Illinois, registering a custom made vehicle is much more difficult than some other states. Illinois allows for three separate kinds of registrations: Custom Vehicles, Street Rods, and Specialty Constructed.

To be classified as a **custom vehicle**, your car must be all of the following:

- At least 25 years old but newer than 1948, or a replica of such a vehicle.
- Altered from the manufacturer's original design or has a body constructed from nonoriginal materials.
- Used only for occasional transportation, exhibitions, club activities, parades, tours, and similar uses.
- Not used for general daily transportation.

A **street rod** is different from a "custom vehicle" in that it is older. A street rod is defined as a vehicle that is all of the following:

- Built in 1948 or older, or a replica of such a vehicle.
- Has been altered from the manufacturer's original design or has a body constructed from nonoriginal materials.
- Used only for occasional transportation, exhibitions, club activities, parades, tours, and similar uses.
- Not used for general daily transportation.

A vehicle is considered **specially constructed** if it's a type that is normally required to be registered and either of the following apply:

- It has been materially altered from its original construction by the removal, addition, or substitution of essential parts.
- It was not originally constructed under a distinctive name by a generally recognized manufacturer of vehicles.

The rules for custom vehicles and street rods can be found at:

http://www.cyberdriveillinois.com/departments/vehicles/title_and_registration/apply_custom_rod.html. They do need to be inspected, The Secretary of State Police will inspect the vehicle by appointment, using the form and inspected by a National Street Rod Association (NSRA) inspector

The specialty constructed group is the toughest to license. A Fact sheet is here: http://www.cyberdriveillinois.com/publications/pdf_publications/sos_dop173.pdf and specific requirements are here: http://www.cyberdriveillinois.com/publications/pdf_publications/sos_dop171.pdf

When first implemented, the NSRA inspectors were helpful and registrations were accomplished quickly. Something changed, and NSRA inspectors became virtually unavailable. This reportedly happened after a NSRA inspected car was impounded by the SOS (reportedly for stolen parts) and the NSRA inspectors were concerned with liability issues. Last year few new vehicles were licensed. If you plan to license such a vehicle in Illinois, a long hard look at the requirements is in order before you start, and finding an NSRA inspector who can help early in the process will be well worthwhile.

If you are one of the folks in this group, contact the Secretary of State of Illinois, and discuss the status with them. Ask what you need to do to prove that the parts you are using are not stolen, ask what items on their inspection list have suggested construction descriptions. (Like seat belts. The form indicates you have to have them. The inspector will not let you pass if your seat belts mount to a sheet metal panel, even with the biggest, strongest fender washers under the panel. They are looking for a mount that bolts firmly and safely to a frame member. You may not have designed a frame member in a position to mount seat belts, you may have to modify or add to the frame. Shoulder belts can be very problematic, ask ahead of time what they want. The only shoulder belts that seem to have universal approval are those mounted CORRECTLY to an approved roll bar or roll cage.)

Meeting Minutes -

Virginia Hansen

FRIDAY, MAY 18, 2012 <Thanks to Virginia Hansen for being temporary secretary tonight!>

Bruce Jones called the meeting to order at 7:05 p.m. This is "battery and bicycle night" with three different electric bicycles on display. Bruce provided an update on an electric vehicle project he's working on with Austin Energy, to provide an electric vehicle readiness plan in an area from Austin to San Antonio. Everyone in audience introduced themselves and told a little about themselves -- most seemed interested in conversions. Dues are still only \$15 after 30 years, so join the FVEAA.

Next meeting in June, Judy Biggert, our 13th District Congressional representative will be the speaker and she will discuss the electric vehicle

legislation she is trying to get through Congress.

Committee reports

Financial Assistance: George Vergara has ideas for the financial assistance committee, including a rally to show off the EVs but need someone to lead the planning.

Electric Bicycles

Dennis Doney presented his electric bicycle and talked a bit about his racing past. He got interested in electric cars but started with a bike. Things you learn about a bike are related to a car. He purchased the bike at K-Mart which comes with 85% of everything you need. He started with lithium ion batteries but he's converted to lead acid. Price and performance go hand in hand. There are bikes at Menards for \$600. Pedal system is used only if the batteries fail. Top of the line system looked good until it came down to missing some details like mounting

bracket, or torque arm. You do not want wheel to come off on an electric bike.

Cannot have aluminum fork as it's not strong enough to handle the torque. Avoid suspension systems. Speed up to 25 mph -- range of 20 miles. He did change knobby tires and put on smooth tires, has cruise controls. Switch mounted ped - a -lock. Twist brakes. He talked about regenerative braking, cruise control, permanent magnet,

Ted Lowe then talked about the bike he was working on and described the batteries, a different motor location than Dennis' bike, and various aspects of the design and control. He was converting to Lithium batteries from lead acid.

His motor is connected to a worm gear in the area where the pedal cranks met the body. That allowed the gear shift to work just like a normal bike. You can shift gears and go fast. It provides good reliable transportation. Batteries can last about five years. Need lubrication on chain occasionally. China is selling millions of electric bikes because it has the infrastructure. Not much is happening in the U.S. regarding bikes.

After the Break

We were privileged to have Dr. Said Al-Hallaj, from All Cell Technologies, LLC, 2321 W. 41st St., Chicago, IL 60809 come and speak on lithium-ion battery technologies and thermal management systems.

Dr. Al-Hallaj provided an engaging presentation and overview of lithium - ion batteries and their importance in the market. (Members can refer to his presentation in the FVEAA file bank) Automotive applications require full range of lithium-ion batteries. And in his words, "who killed the electric car?" HIGH PRICES!!!

A few highlights from the presentation

- Li-ion batteries have high performance but are very temperamental.
- Key problem dealing with heat generated by cells during charge, discharge
- Chemical reactions inside cells add complexity to the heat problems.
- Thermal degradation is a hot button issue.
- Performance aside, safety issues still exist.
- Safety improvements are being made on multiple fronts.
- System level solutions are required for safety and performance.
- Battery performance must evolve to achieve mass adaptation
- New cooling methods offer improved performance
- Concluding remarks: one size does not fit all.

Thanks Dr. Al-Hallaj!

Membership Form*Ted Lowe***FVEAA Membership Application Form**

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 Address: _____
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 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)	
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Total Due from Both Columns:			

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

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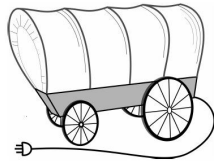
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