

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

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February 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, February 17th, 2012 - 7:00PM at
Community Christian Church,
1635 Emerson Lane
Naperville, Illinois 60540
<http://communitychristian.org/>**

Community Christian Church at the intersection of Ogden and Richert avenue in Naperville. Also called the "Yellow Box" building, located on the western side of the building.

<http://maps.google.com/maps?q=1635+Emerson+Lane+Naperville+IL&hl=en&sl=37.0625,95.677068&sspn=57.030354,146.5136>

Agenda

- Call To Order
- Old Business
- Committee Reports
- New Business
- Miodrag Zubic - 3rd in a Series on Motor Controllers
- Keith Baubkus - Solar Powered EV Charging Stations
- Intermission: Refreshments, Networking and EV Viewing. [Ask the Experts!]
- Program: Ken Adams - 350Green

Hi everyone.

It saddens me to announce that our good friends at Packer Engineering appear to be closing their doors according to sources including the Naperville Community Television Channel 17 article posted recently: <http://www.nctv17.com/napervillenews17/article.php?id=1233>
We are grateful for the hospitality from Dr. Kenneth Packer these last four or five years and are so very sorry the economic downturn hit them so hard. Cash flow seems to be the main issue.

NEW MEETING LOCATION ! !

So we in the FVEAA are looking for a new permanent meeting location. This month we're temporarily meeting at the Community Christian Church at the intersection of Ogden and Richert Drive in the middle of Naperville this Friday February 17.

Please pass the word to all those you know who are not members, that this month we are at
(AND I REPEAT FROM ABOVE)

**Community Christian Church
635 Emerson Lane
Naperville, IL 60540**

[Google maps link](#)

at the intersection of Ogden and Richert avenue in Naperville. Also called the "Yellow Box" because, well, it looks like a yellow box. We'll have the small theater on the western side of the building.

<http://maps.google.com/>

[maps?q=1635+Emerson+Lane+Naperville+IL&hl=en&ll=37.0625,95.677068&sspn=57.030354,146.5136](http://maps.google.com/maps?q=1635+Emerson+Lane+Naperville+IL&hl=en&ll=37.0625,95.677068&sspn=57.030354,146.5136)

JANUARY - SNOW DAY

Last month our meeting was SNOWED out! The first time in memory according to our long-timers. So the program has been pushed to this month, where we again have Ken Adams, regional sales and infrastructure director for 350 Green. He'll provide an update on the 280 charging stations, and fill us in on the lessons learned along the way.

We have a few other topics to cover including Keith Baubkus' solar canopy charging system, and if we have time, Miodrag Zubic, a third talk in his series of presentations on controllers.

UTILITY ELECTRIC VEHICLE POTENTIAL?

On a totally different note I recently read a recent paper from Michael Garvin, President, RENAISS LLC and Joe Sulentic, Associate Professor, University of Iowa entitled "Ideas That Are Shaping the Electric Vehicle Landscape." There are two fresh new concepts in this document that I feel I must share as they are new, but will probably be controversial.

a) Electric Vehicle As Asset (EVAA) The authors basically propose that utilities become PEV car dealers and manage the vehicles as a service. Since utilities are very familiar with managing large fleets of vehicles, why not sell them, manage them, and also then sell the electric "fuel" making the whole package profitable? What a concept! Utilities are large, well established companies that could then both PEVs and sell the fuel they require. In my mind they'd want to hire marketing and sales consultants however, to get such programs rolling. But the financial model presented in the paper appeared solid and proposed a win-win scenario for the utility

and consumers as well. Utilities make a return on investment, and customers pay less for transportation while generating less pollution and without consuming petroleum.

b) Miles Per Gallon-CARbon Release Equivalent (MPG-CRE) is the second new concept. They propose all vehicles be measured not based on miles per gallon or per e-gallon but based on its carbon release per gallon, which takes into consideration pollution from the source of the electricity. Many of those opposed to plug-in electric vehicles attack them by claiming PEVs are just as polluting as gas cars when one takes into account the source of the fuel. Which is NOT true. In the Midwest we have a rough mixture of 36% coal, 32% Natural gas, 26% nuclear, and 3% Renewables (see http://www.eia.gov/cneaf/nuclear/state_profiles/illinois/il.html). Our electricity therefore produces much less pollution here than internal combustion engine (ICE) vehicles on the road.

This "Miles Per Gallon - Carbon Release Equivalent" (MPG-CRE) calculation would provide statistics for any car travelling any number of miles in a miles per gallon (mpg) metric. A typical gasoline powered car may be rated 34 MPG-CRE, with a hybrid being rated at 50 MPG-CRE and a pure Plug-in Electric Vehicle could be rated at 120 MPG-CRE Miles Per Gallon-Carbon Release Equivalent. For owners like our own Ted Lowe who have a PEV powered by electricity generated from solar panels mounted on top of the garage, that car could experience a 270 MPG-CRE or more!

Both interesting and innovative topics.

POLLUTION

I've done some calculations that show a gallon of gas produces a cube of CO² about five and a half feet on a side which represents 95% of the pollution typically emitted from an internal combustion engine. Plus there are a few more cubic feet of noxious gasses like Sulfur Dioxide, and Nitrogen Oxides, particulates etc. An electric car here in the Chicago area uses electricity produced from 36% coal, 32% Natural gas, 26% nuclear, and 3% renewables in the Midwest. In this case the CO² is less than a third of what would be produced from gasoline. The Sulfur Dioxide which can be higher if the electricity is from 100% coal, is around that of gasoline due to our mixture of electricity sources.

Since on average, people in the USA consume over 1.5 gallons of gasoline per person per day, this means a huge cloud of pollution flows from non-PEV cars, as we all know. Time to get an electric.

See you Friday!
Bruce

Rich's Ramblings

Rich Carroll

I specifically went looking for Electric Vehicles shown at the 2012 Chicago Auto Show. There were some notables that chose not to present vehicles, (Tesla and Fisker) likely because much of their current and future production has already been sold. Others such as the Th!nk City are no longer producing cars and don't appear to have a plan to change that. I did find several EV's though, see my individual comments below.

Auto Show historians note that the first Chicago Auto Show in 1901 featured electric cars among other choices, and while the show has enlarged almost every time it is presented, it again features a mixture of electric propelled vehicles along with gasoline propelled vehicles and hybrids, a mix of the two technologies. The Auto Show used to be presented in a corner of the old Chicago Coliseum at 1513 South Wabash. In 1901, the show consisted of fewer than 20 cars. The 2012 Chicago Auto Show takes the area the show needs to approximately 1,000,000 sq. feet in two of McCormick Places biggest buildings. Almost 1,000 vehicles are

displayed on the show floor, and that doesn't include vehicles used in the four indoor 'test tracks' or in the five outdoor 'ride and drive' tests that have been introduced this year. These new outdoor tests offer quick on and off opportunities to drive a new car, and promptly return to the middle of the show floor.

The Chicago Auto Show offers a preview to journalists who want to write about the cars and the activities that comprise the show. I went down on February 8, a day ahead of the "First Look for Charity" black tie event. While the exhibits were MOSTLY set up, not all of the brochures were in place, and the carpet tapers were working in many areas, as were the lighting arrangers. I did see a number of electrics, mostly available for sale now, or very soon. I also had a chance to discuss what will be coming from some manufacturers not yet in the EV production, and to peek at some future trends.

RAV4-EV

As I walked into the show, the first EVs I ran into were several new RAV4-EVs from Toyota. For those of you with a good memory, Toyota had produced a RAV4-EV in the past, from 1997 to 2003 with Nickel Metal Hydride batteries. These were equipped with a 27 kWh pack, giving a 100 to 120 mile range. At first, these first generation RAV4-EVs were only leased, but later Toyota placed a \$42,000 list price on them and sold them with California rebates and US Tax Credits which put the cars into customer hands for as little as \$29,000. Many have sold for twice that in recent years as very desirable used cars. The second generation car is just being introduced, and is a joint venture between Toyota and Tesla Motors. With a 50 kWh pack, the range is given as 80 to 120 miles. What appeared on the Toyota floor space was gorgeous, and well presented, but labeled as prototypes and locked up very tightly. The Toyota staff on Press Preview day was knowledgeable and enthusiastic about these cars. The staff had a thorough knowledge of both the current offering and the history of the earlier version. They will not be introduced in Chicago for a while, and Toyota would not release pricing information. The RAV4-EV had a prominent place in the Toyota presentation, and hopefully we will see some of these cars very soon. The new RAV4-EV looks larger than the last generation, almost Highlander sized.

Nissan Leaf

The Nissan Leaf was also shown at the Chicago Auto Show. It was not shown as a front line car, but was shown with a 480V quick charge charging station (or at least a dummy station, the plug was locked for the show) The Nissan people were fairly knowledgeable, and mildly enthusiastic about the car. No technical details have been changed for the Leaf. Nissan staff had an excellent knowledge of the car, it's various options, and an excellent knowledge of various charging sources and power levels.

Ford Focus and Transit Connect Electric

Both were presented last year, but the Ford personnel had a better familiarization with the details of the Focus and were more than excited about the car, where last year they seemed to have a quiet anticipation. Ford tells me that the Focus Electric is now in production, and we will see examples soon. The Ford Transit Connect (which we saw at the December FVEAA meeting) was parked with the Ford Trucks, and the Truck personnel were not in place during the preview day. The normal Ford Personnel knew of the Transit Connect, but knew little of the details. I think Ford has relegated the Transit Connect to their truck specialists, despite the announcement that the window van, with passenger seats, is now available. The Transit Connect van on display looked exactly like the one that was on display last year, replete with powered by Azure Dynamics lettering.

Mitsubishi i (i-MiEV)

The official name in the US has been shortened from i-MiEV to i. This is small, but quite cute car, built right here in Illinois, and touted as the "Most Affordable EV in America." It also leads the EPA's list of electric cars for best energy economy at 112 MPGe. The 16 kWh battery pack is listed as giving "62 miles range, based on independent EPA testing." In base trim, the MSRP is \$29,125, making it the lowest sticker priced EV in the USA. The front and rear seats are surprisingly roomy, although it leaves very little extra room if you carry four people. The tires look smaller than they are, I had thought they were 13 or 14 inch (which are getting pretty hard to find) but they are 145/65R15 on the front, and 175/60R15 on the back. If you are looking for an EV on a budget, this is a quality car, and as a bonus, it is made here in Illinois.

Smart ForTwo

Smart had announced that they would bring a third generation Smart car to the Auto Show, but did not. I asked a senior official from Smart about this, and was told that they had developed the third generation, but had not decided on where to promote it, or what level to price it at. This young lady (I think she is the same person I talked to two years ago at the Auto Show) agreed with my assessment that a \$600/month lease price was not competitive, (their official price for the Generation 2 Smart ForTwo Electric) but could offer no further information. My evaluation is the same now as it was 2 years ago, and that they have mis-priced the electric version significantly. They were claiming a 80 – 100 mile range for the Gen 2 Smart For Two Electric, but seem to not have much details yet on the Generation 3 Smart For Two Electric.

Volt

Lastly, I walked by the Volt display. Lots of Volts to see, lots of knowledgeable people almost begging to help you. Test rides offered on the floor, and outside test drives immediately available. A fairly glitzy presentation, similar to GM presentations in the past, led me to think that they were heavily promoting the car. Apparently Chevrolet did not make their initial sales goal of 10,000 Volts in the first year, so they are trying promotion. Every person I talked to in the Volt exhibit had a perfect recall of all pertinent details and a fairly easy way of presenting these facts. In my estimation, the Volt is an EV, a BEV that happens to also carry a small gasoline-powered generator on board to allow much longer drives if needed. This makes it a very useful piece of transportation, although a little pricey for my needs.

If you were to include hybrids and plug in hybrids, the list becomes longer yet, with numerous cars promised 'just down the road.'

Meeting Minutes -

January 20 was a Snow Day!!



Ford Focus Electric



Ford Focus Electric





Ford Transit Connect Electric



Mitsubishi i (i- MiEV)



Mitsubishi i (i- MiEV)



Mitsubishi i (i- MiEV)

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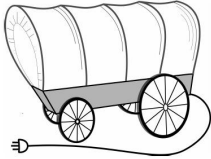





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From educating and encouraging our customers to conserve, to using cleaner electric vehicle technology in our own operations, ComEd is meeting the environmental needs of our communities, today and tomorrow.

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