



July 2014 FVEAA Newsletter

Fox Valley Electric Auto Association

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

Next Meeting (with Prelude 3.2 miles nearby beforehand)

July 18, 2014

Prelude (5 - 6:30pm):

See the Porsche FVEAA Club Car and Composite (Kevlar) Battery Boxes!

Mike Willuweit's House (just 3.2 miles south of the Ice Arena)

1158 Wintergreen Terrace

Batavia, IL

[Google Map](#)

Meeting (7pm):

Fox Valley Ice Arena

1996 S. Kirk Rd #110

Geneva, IL

[Google Map](#)

Agenda

- 5-6:30 Prelude - See Porsche and Composite Battery Boxes
- 6:30 Doors Open
- 7:00 Call to Order, Welcome and Introductions
- Committee Reports
- Old Business / New Business
- Presentation: Commemoration - Fox Valley Ice Arena Charging Station
- Presentation: John Jeide - BMS Systems and Experiences
- Presentation: David Zygmunt - Western Trip adventure in a Tesla Model S
- 9:15 Close

President's Words

Bruce Jones

Hi EVeryone,

By the way, thanks to Ted Lowe who has done an absolutely fantastic job the last several months helping set up meetings, provide presentations and arranging for businesses to come and present, like Elevate Energy.

And he was instrumental in getting them to sign up as a business partner. Three cheers for Ted!

July at Fox Valley Ice Arena

See you all this Friday at the Fox Valley ICE Arena 1996 S Kirk Rd #110, Geneva, IL. same time

Wanxiang Tour Wednesday July 30

We're all set for the excellent opportunity to visit and tour a solar panel manufacturing facility in Rockford, as we were invited by Daniel Li of Wanxiang who came to speak with us in May.

WHAT: Scheduled a tour of the Wanxing New Energy Division solar panel manufacturing facility

WHEN: Wed. July 30, 2014

TIME: 10:30 a.m. - noonish

45 minute plant tour + 30 minute solar farm tour

WHERE: 1838 Blackhawk Rd, Rockford (GPS address)

At the Next meeting 7/18/2014 at the Fox Valley Ice Arena we'll discuss ways to car/van pool out there and suggest chipping in to help pay the driver for gas etc.

CCC Charging Station

The constant rain delayed the construction and paving of the parking area at CCC. But the last few days the sidewalk was poured so soon the Clipper Creek CS-40 - 208/240V 30A Single Level 2 charging station will be installed. Sidewalk looks great! Six foot wire whip hanging out of the pole will be used for charger.



Sidewalk just poured at CCC 7/10/2014... almost ready for charger installation!

See y'all at Mike Willuweit's house (if you can come) before the meeting and then the ICE arena Friday!

Thanks
Bruce

<https://www.facebook.com/FoxValleyElectricAutoAssociation>

Welcome New Charter Business Member Elevate Energy!

Ted Lowe

The FVEAA is delighted to welcome Elevate Energy as a new Charter Business Member!

Administered by Elevate Energy, a nonprofit dedicated to ensuring smarter energy use for all, the ComEd Residential Real-Time Pricing (RRTP) program is an hourly pricing program for residential customers. This program allows you to pay the hourly, market price for electricity. With real-time hourly market prices, it is possible for the price of electricity to be negative for short periods of time, typically in the middle of the night. Since ComEd RRTP participants pay the market price of electricity (with no markup), they are actually being paid to use electricity during negative priced hours, making it an ideal fit for electric vehicle owners who charge at night. Contact an RRTP specialist to see if you are a good fit for the program.

NOTE: Meeting Prelude Invitation

Ted Lowe

We have been cordially invited to view the 2006 Porsche Club Car, now owned by member Mike Willuweit before the regular July meeting. Come anytime between 5 - 6:30pm. Mike's house is just 3 miles south of the Ice Arena, so this is an efficient time to see the Porsche and the new composite (Kevlar) battery boxes. See Mike's address and Google Map link above and hope to see you there!

Thanks to Keith Baubkus!

Ted Lowe

Please join me in thanking Keith Baubkus for his years of dedicated service as Newsletter Editor! i've offered to take over the role going forward. Thanks so much Keith!!!

This Month's Presentations

- We'll commemorate the installation of the Chargepoint Charging station at the Fox Valley Ice Arena
- John Jeide will be covering various aspects of BMS battery management systems and share his last 8 years of experience on the subject
- David Zygmunt, fresh off a huge trip west will share his adventures driving the Tesla Model S

Rich's Ramblings

Rich Carroll

The 2014 Pikes Peak International Hill Climb again produced some rather astounding results, showing, in particular, the strength of complete electric power. Let me summarize what the hill climb is. This is a one-car at a time, compete for times race up one of the best known mountains in America. The course is a 12.42 mile course with 156 turns that begins at 9,390 feet and ends near the summit at 14,115 feet. the 2014 event is the 91st running of the race, which has seen the course slowly change from almost all gravel roads, over the years, to completely paved. The course records for a long time were in the over 10 minute range, and only within the past few years have the very best competitors been able to get under that magic ten minute goal. With two exceptions, five or six drivers ultra qualified drivers were clustered between 9:40 and 10:00. Last year Monster Tajima (a nine time overall winner at Pikes Peak) looked like he might be in the 9 minute range, based on blisteringly fast times in qualifying. Unfortunately, he did not finish, having electrical troubles. Tajima's best time to date has been 9:46.530. Last year, Rhys Millen was second with an incredible time of 9:02, much faster than third place. And the overall winner last year at 8:13 was Sebastien Loeb. Sebastien had several notable

factors in his victory. He is absolutely one of the very best (if not the best) driver in the world on a curvy course with many horseshoe bends. Sebastien has been the World Rally Champion nine times in a row! He arrived last year with a Red Bull owned, Citroen prepared, purpose built racer (kind of looking like the general shape of a small Citroen sedan) that had an 875 HP engine in a car that weighed 875 Kg. (1925 lb.) He practiced the course, had special Michelin tires, and went unbelievably fast.

This year, Sebastien Loeb was nowhere to be seen in Colorado. The Millens were also absent, so the race was left to names you don't know, but will. Mitsubishi arrived with their current version of their Evolution i-MiEV race cars, and had two extremely well qualified drivers. Greg Tracy is a six times Pikes Peak motorcycle champion, so he has lots of experience on the course. Two years ago, Tracy, in his last ride on a bike, a Ducati, broke the ten-minute barrier with a time of 9:58.262. Last year he competed with Mitsubishi in their i-Miev car, running a 10:23.6.

The other Mitsubishi i-MiEV was driven by Hiroshi Masuoka, second last year in the Electric Division posting a 10:21.8. Masuoka is a 2002 and 2003 Dakar Rally Champion, one of only a few who can claim back to back victories in this grueling race.

Monster Tajima was also back with his own purpose built electric. The gasoline powered hopes were on several folks, principally Romain Dumas. Dumas, a French born driver, now resides in Switzerland, and has a long racing history. His current employer is Penske racing, and his primary drive is a factory backed Porsche in endurance racing. He has overall wins in the 24 hours of LeMans twice, an overall win at 24 Hours Nürburgring and the 24 hour race at Spa.

It was an interesting day, marred by the death of one of the veteran motorcycle riders, which finished with many competitors above 9:54. But, like last year, there were a few who not only beat that goal, but drove incredibly faster than the others. Most car races are won by fractions of a second in a ten minute span, very rarely a couple of seconds in a ten minute run.

The two electrics of Mitsubishi finished second and third, Masuoka with a 9:12.204 and Tracy with a 9:08.188. Monster Tajima finished third in the electric class with a time of 9:43.900. (Certainly no slouch with an overall fourth) First overall was Romain Dumas, again in a purpose built gasoline powered racer, posting a time of 9:05.801.

Overall, the picture is very clear that electrics can certainly compete in courses like this. The electric cars were running average speeds of up to 82 miles per hour, in a course that is slowed by 156 turns. The course climbs 4700 feet in altitude in it's 12.42 mile length. When the electrics can run second and third and fourth and literally run away from all the gas competitors except one (both I-MiEV's were 42+ SECONDS faster than all gas cars except Dumas) is a tremendous boost to electric propulsion. We do owe a sincere thanks to Mitsubishi who committed lots of time, energy, dollars and talent to this race. Without Mitsubishi's commitment, electrics would be "competitive." With their effort, EV's are almost "dominant." (Except for these French born rally drivers, also in incredible cars.)

My opinions (electrics will win, soon) are now shared by a great number of automotive journalists. Keep watching for next year, and put your \$ on electrics and well paid European rally drivers. And never count out Nobuhiro "Monster" Tajima. He has won the unlimited class nine times, and was the first to crack the ten minute barrier. He's only 64 years old, and you have to root for the 'old guys.' Fellow competitors say he is a kindly old man, with the exception of his time behind the steering wheel.

Membership Update

Ted Lowe

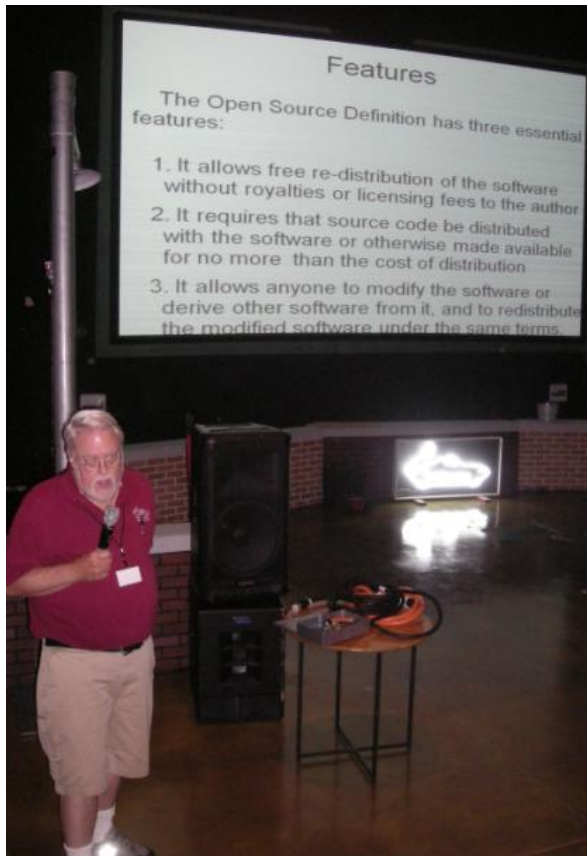
Let's GROW the FVEAA in 2014! We currently have only 95 paid-up members which is the lowest membership count i've seen in 15 years with the FVEAA. Please invite your friends, neighbors, family,

colleagues, etc. to FVEAA meetings and EEvents!

Last Meeting



**Fox Valley Ice Arena - JUNE 18th Meeting
Location has a dual charger we helped to fund
(thanks to Todd Martin)**



Rich Carroll on "Open Source"



Ted and Rich discussing Open Source, in general and as it relates to EVs

- Maureen [Stillman](#)
- Todd Martin, Ethan (and Sophia)
- Chris Sharp
- Bruce Jones
- Ted Lowe
- Mike [Willuweit](#)
- Andy Schaeffer
- John [Bannes](#) (Not Pictured)
- Jeff Miller
- Bill Abernathy

Attendees



Attendees at the last Dodge Dakota conversion project at Ted Lowe's house 6/28/14

And Jeff Miller (right) who gave an excellent presentation on composite battery box design last meeting,





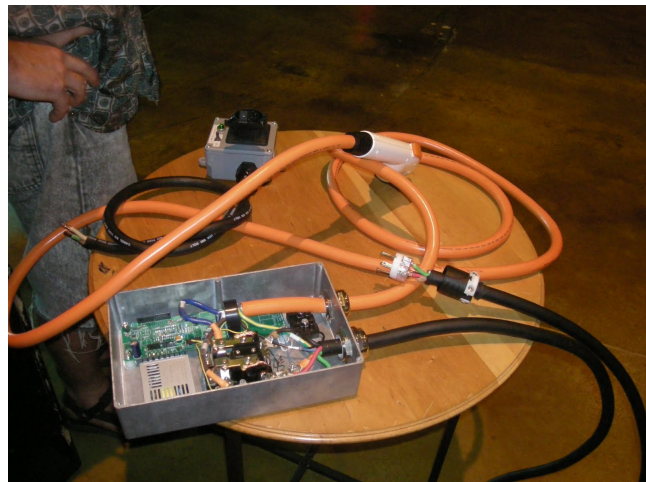
Dave Zygmunt's Tesla Model S



Hmm.. I'm not quite sure that's how the J1772 is supposed to work



Can you find the hidden message behind Dave Zygmunt's Tesla?



Ted shows a great charging system

Meeting Minutes - June

Dave Zygmunt (for Grant Gerke)

Welcome

The meeting started at 7:00 p.m. -Member introductions. Member Keith: been a few meetings since I've attended, working on a new charging location install. Member George: haven't been here awhile, work preventing me from coming frequently. Member Jim: haven't been to a meeting in awhile, working on a kit car, 1929 Mercedes coupe, fiberglass replica, making it into an electric car. Member George: gas prices going up!

Review agenda

Dio is going to check on prices for a porta-potty for the Drive Electric Week

Old Business:

-None

New Business:

-None

-Bruce had a board meeting at his place this past week. New ideas generated.

-Andrew Daylor kit car request for help. Bradley GT2. When he comes we can help in at a meeting
We're out on Facebook

Next Meeting

Next meeting, at Fox Valley Ice Arena. At 1996 S Kirk Rd #110, Geneva, IL. No ice skating that evening. Meeting begins at 7:00PM. Website www.fvia.us. Room for 40 people, TV monitor for presentations.

CCC Charging Station

Light Pole installed 6/13 with wiring for a charging station. Clipper Creek CS-40 EVSE. July installation. Good visibility from roads for promoting its presence. Showed the layout of the paint, sign, and EVSE. Green paint? Lime paint? White paint? Blue paint, proposed legislation each year. Todd: dual cables? Bruce: No, single cable. Steve: Triton uses blue paint, tow zone, and a large stencil. Dave Kelsch will loan stencil from his business

Wanxiang Solar Panel Factory visit?

Rockford solar manufacturing site. Wednesday morning 10:30am, end of July or beginning of August. Who would go on a Wednesday? Wanxiang same company that purchased A123 and Fisker. We could organize this on the forum? Has to be on a Wednesday, because that's when the plant will be operating. Will organize on the forum, will do it on July 30.

National Drive Electric week

Sunday Sept 21,

Setup Noon-1p

1p-4p

take down and pizza by 5p

Aurora's green fest presented.**Other**

Chris Young was present and we'd like a presentation on his conversion of his white pickup truck. August meeting? Chevy, Nissan, and an owner brought a Tesla. Delivery vehicle built in Boulder, CO, 100 mile range.

Presentation by Jeff Miller- Composite battery box design for Mike Willuweit's 2005 Porsche 944

Excellent presentation showing a new way to build a battery box, including where they have to fit, what they have to hold, core materials, fabric reinforcement

Resources

Foam: <http://www.uscomposites.com/foam.html>

<http://building.dow.com/na/en/products/insulation/supertuffr.htm>

I-Beam physics

https://www.dlswb.rmit.edu.au/toolbox/buildright/content/bcgbc4010a/04_struct_members/01_beams/page_004.htm

Fabric reinforcement

http://www.bgf.com/pages/data_sheet_detail/?fabric=1166&format=English

specs on the 8.9 oz Satin weaze S Glass \$13.95 per yard 38 inches wide

Carbon Fiber the 5.7 oz x 42 inch wide \$16 or 60 inch wide \$21.50 with kevlar tracer

http://www.bgf.com/pages/data_sheet_detail/?fabric=1127&format=English

On the Kevlar front the 5 oz has the above specs. At \$16.5 for 38 inches or \$25 for 60 inches it is certainly in the running.

Rich Carroll and Ted Lowe - Open Source software and Charging Standards

Rich and Ted presented and did an excellent job describing the topic and issues. Rich began, and discussed the philosophy and history of Open Source Software and Open Source hardware. Rich then handed the microphone to Ted who elaborated on how the open source concept has affected the way we charge our EV's

Meeting adjourned at 9:30

Membership Form

Ted Lowe

FVEAA Membership Application Form - Version 2014-01-01

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 ? _____

Membership Types and Annual Dues (please circle one):

Individual	\$20
Business	\$100
Premier Business	\$250
Charter Business	\$500

Newsletter Delivery Type (please circle one): No Newsletter Electronic

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

FVEAA

PO Box 214

Wheaton, IL 60187-0214

Attn: Membership

FVEAA Business Members



ELEVATE ENERGY
Smarter energy use for all

ComEd Residential Real-Time Pricing Program (linked to ComEd.com/RRTP)
Administered by Elevate Energy, a nonprofit dedicated to ensuring smarter energy use for all.

322 S Green St, Suite 300
Chicago, IL 60607

Phone: 1-888-202-RRTP (7787)
Web: ComEd.com/RRTP

The ComEd Residential Real-Time Pricing (RRTP) program is an hourly pricing program for residential customers. This program allows you to pay the hourly, market price for electricity. With real-time hourly market prices, it is possible for the price of electricity to be negative for short periods of time, typically in the middle of the night. Since ComEd RRTP participants pay the market price of electricity (with no markup), they are actually being paid to use electricity during negative priced hours, making it an ideal fit for electric vehicle owners who charge at night. Contact an RRTP specialist to see if you are a good fit for the program



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