



May 2023 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

This month's meeting is on Friday **May 19, 2023**
7:00 p.m. and will be IN-PERSON and on Zoom

Location:

Unitarian Universalist Society of Geneva

102 S 2nd St, Geneva, IL 60134

MAP: [Unitarian Universalist Society of Geneva](#)

Note for those needing charging: Plugshare shows 1 Tesla HPWC Destination Charger, up to 64A, and 1 ClipperCreek J1772.EVSE about three blocks east of the Unitarian facility at 15 S River Lane, behind the Police Station - near Atwater's restaurant by the river.

Meeting starts at 7pm and will run until about 9pm.

Topic: FVEAA Monthly Meeting

Time: Fri May 19, 2023 6:45 PM CT (pre-meeting setup check), Meeting 7:00 PM

Join Zoom Meeting:

<https://us02web.zoom.us/j/95901481473?pwd=UnpJVUJOUmVPOFZqR013ZFpPbzM0UT09>

Dial-in for audio-only users: Call: 312-626-6799

Enter Meeting ID when prompted: 95901481473#

Participant ID: (blank, just #) *6 mutes/unmutes your line, *9 raises your virtual hand

Contact us if you need the password for audio only calls.

Agenda

- 6:45 Doors Open
- 7:00 Introductions
- 7:40 William McDaniel review of parts he builds for Netgain AC motors
- 8:30 Break
- 8:40 Simon Gibson on CAN bus basics, if time allows

Greeting EV enthusiasts,

Last month was a great month for the FVEAA.

Our meeting was well attended at the Unitarian Church in Geneva and we were given two outstanding presentations. Both presentations, one given by two students from the University of Chicago's SAE team, on their eBaja project as well as our own Marty Belovicz speaking on 3D printing were very informative and engaging for all in attendance. I especially enjoyed being able to put my hand on pieces created by 3D printing as I had never seen first-hand the results of 3D printing before.

Even though it was a bit cold, the Peck farm display of several of our EV's was a success. We engaged many people discussing a variety of subjects relating to electric vehicles. We also made some new contacts and invited people to our monthly meetings.

On the legislative front the Electric Vehicle Charging Act has passed both houses in Springfield and is expected to be signed by the governor. The EV charging act requires **EV capable parking spaces** for new single-family homes and newly constructed or renovated multi-unit residential buildings. Thank you to all who participated in speaking up for this important bill. It is my belief we get a huge bang for our buck moving the EV revolution forward by enacting legislation which promotes the use of Electric Vehicles.

I had the opportunity to represent the FVEAA at two recent events in Chicago as part of a public outreach about where public EV chargers should be installed in 25 priority communities in suburban Cook County. Cook County has received federal funding to install 75 EV charging stations and was surveying the public to assess where people would like the charging stations to be located. One event took place at South Suburban College and the other at Thatcher Woods Park. This was part of the work being done on the new Cook county charging infrastructure project as outlined by our March speaker Sydney VanKuren from MUSE Community + Design.

Jeff and I will be out of town for the May meeting. I will be in London as my daughter's band "Prima Queen " will be headlining a show there. The meeting will be in good hands as FVEAA Secretary Bruce Jones and Director Rich Hirschberg will co-chair the meeting. Stay Charged! Tracey



Tracey promoting EVSE locations at Thatcher Woods Park on Sunday 5/7/2023

President's Words

Jeff Miller

June Morning Meeting

The **June** meeting will be on FRIDAY ***MORNING*** 9 AM at **Argonne National Laboratory**, make sure you clear your calendar. See Bruce's post below for instructions on how to attend. I remember going to this many years ago and how much fun it was. Make sure you register in advance and follow the instructions. I registered the other day, and look forward to this outing.

April Meeting

Thanks to the UIC SAE team for going over their EBaja Plans. I enjoyed the presentation and hopefully the team got a nice boost from the discussion.

Thanks to Martin Belovicz for letting us into his world of 3d printing, materials, and design.

May Meeting

William McDaniel is going to bring an electric drivetrain, including the transmission, that fits a BMW 3 series from the late 90's and early 2000's. This is in line with his goal to give people the ability to pull an engine and trans out and drop in an electric replacement. He is making many of the parts to integrate the controller, contactors, and motor all in one beautiful package.

His blog on the topic is:

<http://evbimmer325i.blogspot.com/>

It is unfortunate that I won't be there in person to attend this. William has spent years building various parts around Netgain motors, and while he has given us a glimpse of things in the past, this should be an exciting presentation showing a very tidy product.

If time allows, we will also have Simon with an overview of CAN bus. I am sure Simon will do more in the future on CAN bus.

Small composites workshop in my garage

As some of you know I have helped out with various composite battery boxes over the years. Those were simple boxes using foam core and Kevlar / epoxy for the skin to give it strength. Over the last few months I have been dreaming up a few different things to build, and decided to build a small composites shop in my garage. It is supposed to break down so I can at least get two cars in my three car garage. I built a rack to hold the rolls of material, and suspended it on an electric hoist in my garage. I can lower it down to the cutting table, and cut the materials I need. From there I lay them up on the build/heater table. Close the box up around the layup, start the vacuum, and then infuse the parts with resin. After an initial cure I then ramp the temperature up for a final cure. My goal is to build high strength parts mostly out of carbon fiber. The first thing I plan to build is a set of wall mounted book shelves for my wife. It has been a fun project so far, with many more hours to go before I get started building actual parts.

NDEW (National Drive Electric Week) Events

It's time to start planning NDEW events.

Articles I found interesting

<https://arstechnica.com/cars/2023/05/cargo-passengers-even-campers-mercedes-benz-has-a-new-ev-van-platform/>

JUNE 16, 2023 MEETING AT ARGONNE NATIONAL LABORATORY	Bruce Jones
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Our Friday **JUNE 16th** Meeting will be a **morning 3 hour tour of Argonne National Lab. We will NOT be having an evening meeting!**

Put this on your calendar as it is a MORNING tour and we have a 20 person group limit at the moment. Aim to Arrive at 8:30-8:45 a.m. and tour is 9am – 12pm. **The tour starts promptly at 9 a.m. so don't be late.**

EV and Charging Research - Mike Duoba, who works at Argonne, hosted part of the tour in 2015 and is a former FVEAA member who will lead us on the custom half the tour with the EV, Battery and High Speed Charging areas. Specifically, Ccc C v. C v Ccc C. C c ccc Chr chcchc cchhchc h c. H h Ch hvccch hvcvch cchvchccvcvcc cchvccch. H h ccc. Ccccc c c c c c c c c c. C c c. Cc 371 high bay with vehicle dynamometer for testing all kinds of vehicles especially EVs, and Building 300 with equipment for charging infrastructure development and standards work.

Then we'll tour another area of the Lab, the national facility for nuclear structure research, the **Argonne Tandem Linac Accelerator System (ATLAS)**, the world's first superconducting linear accelerator for heavy ions at energies in the vicinity of the Coulomb barrier.

Let Bruce Jones know you are attending and/or send an email to him at bjone35@aim.com so we can get an attendee list. **You must PRE-REGISTER via the link below and have an access badge mailed to you from Argonne prior to the visit. Here are instructions from Argonne:**

Thank you for your interest in touring Argonne National Laboratory! Argonne can host the Fox

Valley Electric Auto Association members on Friday, June 16th, 2023, from 9:00 a.m. until 12:00 p.m. Please read this email in its entirety as it contains important information on your upcoming visit. We will be requesting an Argonne bus for transportation on-site as you will be arriving via personal vehicles. Note required tour attire: long pants and flat, closed-toed shoes; no sleeveless shirts. A group of 20 participants is anticipated.

Please have everyone in your group complete this

registration link by Friday, May 19th,
in order to receive a visitor pass for entry into the Lab.

1. All visitors, 16 and older, must present a state or federal photo I.D., such as a driver's license or passport to be issued a gate pass.
2. **REAL ID compliant identification will be required for you to gain access to Argonne National Laboratory for individuals 18 years of age or older. For a list of acceptable identification please click** <https://www.anl.gov/site-entry-requirements>
3. Visitors should register their name as it appears on their photo I.D.
4. There is an approval process for non-U.S. citizens, including legal permanent residents, that can take up to seven to ten business days. Copies of INS documents, such as permanent resident card or passport, visa, and any supporting documents, if applicable, can be uploaded directly in the visitor registration form.
5. Answer all mandatory questions and submit the form.

Everyone must prominently display their pass while on-site and all vehicles entering the site are subject to search.

Argonne's Code of Conduct sets expectations for everyone in the Argonne community. Please [click here](#) to review Argonne's Code of Conduct before your visit.

DIRECTIONS

The tour guide will meet your group at 9:00 a.m. at the Argonne Information Center which is located off Northgate Road. We will start promptly at 9:00 a.m. so please provide ample time when arriving at the Lab as we cannot guarantee a tour outside of the confirmed time.

The Laboratory is located at South Cass Avenue & Northgate Road, Lemont, Illinois - from I-55 take exit 273A (South Cass Avenue) to Northgate Road (main entrance); follow Northgate Road to the Argonne Information Center. Note: Northgate Road is approximately ¼ mile from I-55. (Best not to follow GPS once on Cass Avenue, as it usually takes people to Argonne's old entrance further south or a Nicor gas installation.)



Gibson's Garage

Simon Gibson

Continuing my quest for CAN Bus traffic I can report that I am able to use SavvyCAN in conjunction with an Arduino Due and CAN Bus transceivers. Once I connected it to the Power Train CAN #3 I was able to view masses of data and capture the messages. The open source tool SavvyCAN provides many features that can decode the messages thanks to much support from the many people who contribute to the project... More later!

<https://www.savvycan.com/>

Further thoughts on the ability to service EVs. Many EVs have a battery pack that can be removed (carefully), from underneath the vehicle. I was considering an idea that a specially adapted trailer could be used to support the vehicle. A lift could be slid underneath from the rear of the trailer and in conjunction with some careful jacking additions, removal of the battery connection, coolant and mounting bolts; be lowered using the lift. The advantage of such a trailer is that it could be possible to take the battery replacement to the vehicle as opposed to trying to transport the vehicle to the service point... Comments?

Upcoming EEvents - Spring 2023

Rich Hirschberg

EVENT 1:

The 6th Annual Summer Celebration Car, Truck & Cycle Show

A fund-raising event for the local VFW Post 5151 and the Schaumburg Township Food Pantry

The Schaumburg Home Depot

Sat., July 22nd, 10:30 am to 3: 30 pm

100 Barrington Rd., Schaumburg, IL

Bigger & better than last year (weather dependent)

5 food vendors, custom trophies, door prizes, silent auction, music, Home Depot vendors, contractors and charity partners

RAIN DATE: Sat., July 29th

Website: www.HomeDepotVehicleShow.weebly.com

EVENT 2:

Cary United Methodist Church Annual Car Show

Sat., July 29th, 9:30 am to 1:30 pm

500 First St., Cary, IL 60013

Local food vendors, games, family fun, judging, and awards

For more info, contact Bob Baker - 847.525.5348

Take care,

Rich Hirschberg - FVEAA Outreach Director

EVENT 3

National Drive Electric Week Northern Event Sat. Sept. 23 - Rich Hirschberg

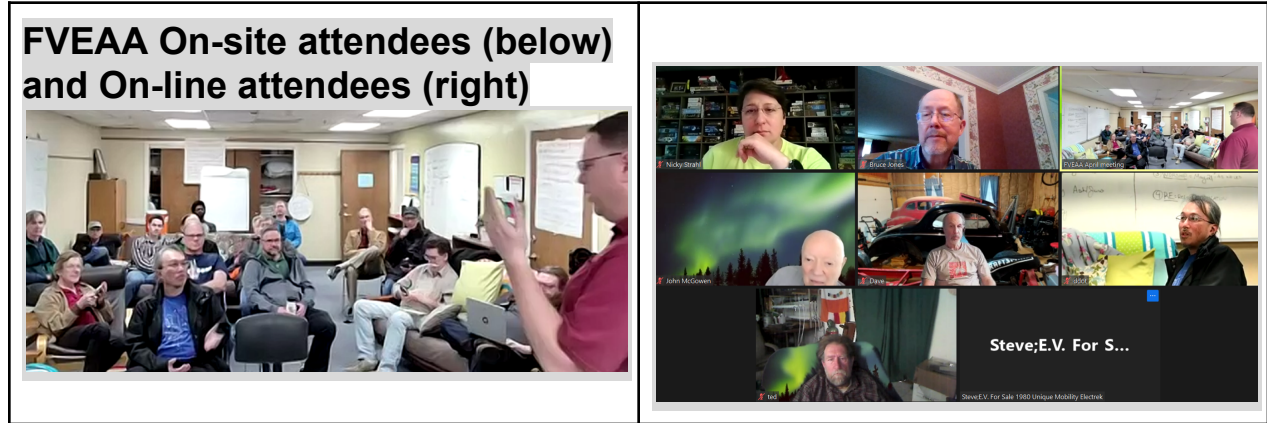
Stay tuned for location and times

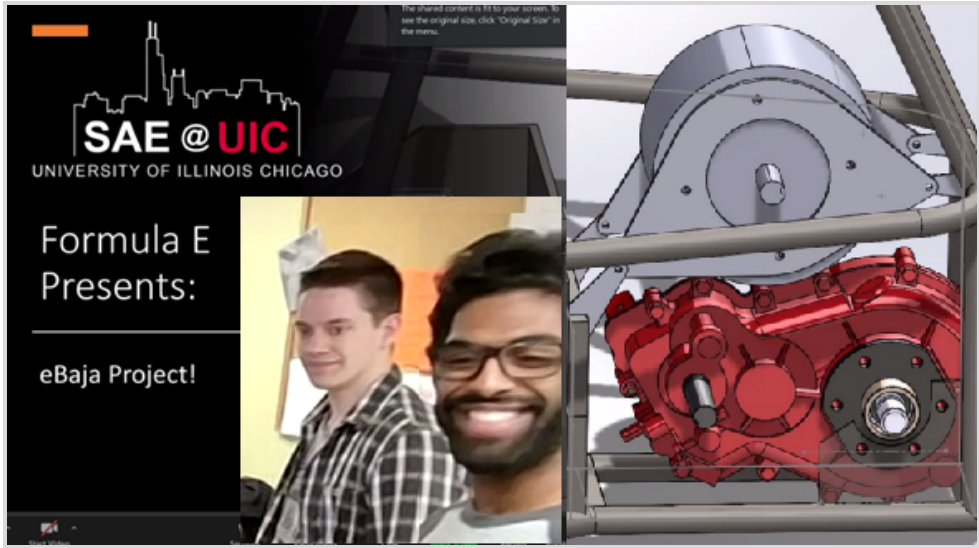
EVENT 4

National Drive Electric Week Southern Event Sat. Sept. 30 Fox Valley Mall - Marty Belovicz and Bruce Jones.

Stay tuned for location and times

Photos of our Meeting April 21, 2023 Bruce Jones





Jonathan Simon and Nick Whitney, SAE members from University of Illinois, Chicago Formula Electric team presented on eBaja Project! An electric race car they are building.

What is FSAE?

- One of the many collegiate design series offered by SAE
- Universities from around the world compete to learn and win
- Probably the best experience for engineering (& other!) majors



Baja SAE

In Baja SAE, engineering students are tasked with designing and building a single-seat, all-terrain sporting vehicle that is to be a prototype for a reliable, maintainable, ergonomic, and economic production vehicle that serves a recreational user market. The students must function as a team to design, engineer, build, test, promote, and compete with a vehicle within the limits of the rules.



Formula SAE®

The Formula SAE® series competitions challenge teams of university undergraduate and graduate students to conceive, design, fabricate, develop, and compete with small, formula-style vehicles. The competitions give teams the chance to demonstrate and prove both their creativity and engineering skills in comparison to teams from other universities around the world.



Formula SAE® Electric

Introduced in 2013, Formula SAE® Electric allows the development of fully electric vehicles within the FSAE® framework. Teams use vehicles powered only by electrical motors and compete in static and dynamic events such as design, presentation, cost, acceleration, skidpad, autocross, endurance, and efficiency.

Mechanical Design – Refurbishment



Original B16 chassis before refurbishment.



Primed frame after light sanding



Fully painted frame



Starting the reassembly process pending part orders.

Our Team

- We participate in:
 - Baja SAE (1980s)
 - Formula SAE (2009)
- Our next goal: build our 1st EV racecar!
- Series itself: 2013
- Formula E team: 2020



Additive Manufacturing

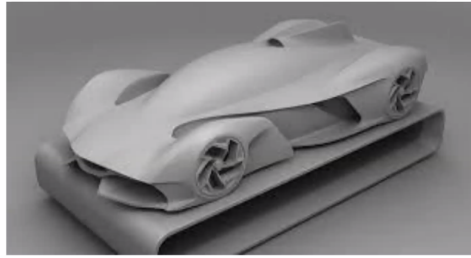
Marti Belovicz 04/21/23

3D PRINTING TECHNOLOGIES

1. FDM
2. SLA
3. SLS
4. POLYJET

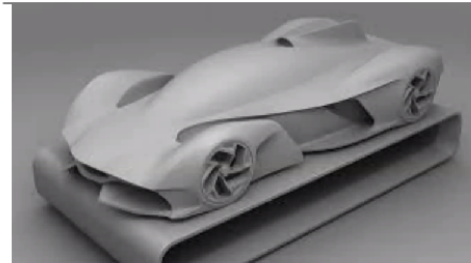


3D printing in the automotive industry



Marty Belovicz presented on “Additive Manufacturing” (3D Printing Technologies) Thanks Marty!!

3D printing in the automotive industry



**We've got LOTS of
EVENTS this
Summer folks!**



Rich Hirschberg on upcoming EVENTS!

**Earth Day- Peck Farm Park 4/22 despite the snow, rain, hail & sleet!
Doug, Tracey, Jeff, Bruce and Larry**



← **Earth Day at Peck Farm Park
4/22 !**

Aurora Green Fest 5/13/2023



**Jason Sapet (green shirt)
engages with the attendees
regarding his VW ID4**



FVEAA business cards available!

Ted Lowe

See one of the officers to get some cards to hand out to people at various Events and daily life to promote EVs and our organization!

Fox Valley Electric Auto Association

PO Box 214
Wheaton, IL 60187-0214

630-260-0424
contactfveaa@fveaa.org

Free Yourself From The Pump^{fm}



Join Us and Discover How!

Check fveaa.org for details about our **monthly meetings!**



Login to our FVEAA website for access to lots of member-only tools!

Ted Lowe

Hi Folks, If you haven't logged in to our website already, please check your email for instructions and login to check it out! Please let me know if you have any questions. Thanks!



FVEAA Web Report as of 2023-05-16 04:58:12

Website Registered User Statistics

Statistic	Value
Total Users	102
Users Never Logged In	36
% Active Users	64.7%
Ave. Days Since Last Visit	565.0 days

The **FVEAA Facebook group** has 119 members as of 1/17/22! If you're on Facebook but not in the group yet, please join us! If you're not on Facebook yet, please consider joining so you can join our group there. This group supplements our forums because it is much easier to use, read, post pictures and videos and get notifications. Please let me know if you have any questions/comments/suggestions. Hope to see you there!

<https://www.facebook.com/groups/889497691136309/>

Here is the **FVEAA's Facebook Page**. Like Us!

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

FVEAA On YouTube - Check out our videos!

The **Fox Valley Electric Auto Association** has a YouTube channel! Subscribe to us and check out our videos! We've had this channel for many years but we're going to start using it more to attract new members and promote EVs. Please let me know if you have some FVEAA-related videos to post.

https://www.youtube.com/channel/UCg_Pgp6g-HEuMICWMO2akPw

Membership Update

We currently have **71 active paid-up** members. Many members have taken advantage of the multi-year renewals offered by the new website! **Please renew & recruit new folks!!!**



FVEAA Membership Report

as of 2023-05-16 04:58:12

Count of Members by Type

Membership Type	Count	Paid Up
Business	1	1
Charter Business	1	1
Family	4	4
Individual	64	63
Lifetime	2	2
Totals	72	71

Other Statistics

Statistic	Value
% Paid Up	98.6%
Avg. Paid Up Days	364.4 days
% With Email	97.2%

Encouraging Our Membership To Grow and Some History

We are growing! We live in a large metro area with 8 million people and EVs are the latest buzz

so we should be able to grow the FVEAA! **Please invite your friends, neighbors, family, colleagues**, etc. to FVEAA meetings and Events. Volunteer to attend Events on behalf of the FVEAA (with or without an EV)! Your ideas on how to help grow the FVEAA are welcomed at any time, thanks! Howard Hansen had a **great idea**... giving an FVEAA membership as a gift!

Here is a time-varying graph of our membership size from 2007 to now. Note that we peaked at 255 members in October 2008 when gas was nearing \$5 per gallon. We were also attending lots more invitational Events with our converted EVs. The first Tesla Roadster was just coming into being. **Let's get out there and grow the FVEAA!!!**



Monthly Treasurer Reports

Ted Lowe

As Treasurer, I am publishing a brief Treasurer's Report to our forums around the time our monthly newsletter is published.

I am publishing our various cash balances (Money Market, Checking, PayPal) to this location: [FVEAA Committees](#) > [Finance](#) > [Treasurer Reports](#)

This area of the forums can only be seen by FVEAA members. As an IL Non-Profit corporation, we have no requirement to publish our assets or financial statements publicly.

Feel free to contact me if you have any FVEAA financial matters to discuss.

Membership Renewals

Ted Lowe

Our membership system sends out "renewal reminder emails" before your membership is due. You will receive up to 3 before being marked "not renewed" (inactive). The sooner you renew, the fewer emails you will receive :) So please pay attention to your email from the FVEAA and renew online using this link (for the easiest approach for all of us):

THANK YOU for your continued support of the FVEAA!

Meeting Minutes - April 21, 2023

Bruce Jones

- The FVEAA meeting started at 7:01 p.m.
- Jeff led introductions all around

- **SAE FSAE Baja Project**
 - Jonathan Simon and Nicholas Whitney gave an excellent detailed presentation on the work they are doing at the University of Chicago SAE (Society of Automotive Engineers) designing an FSAE Electric rules-compliant powertrain for Baja off-roading vehicles.
 - This is a highly competitive electric racing vehicle design initiative pitting their car against those from all around the nation.
 - Basically they are creating a race car from (almost) scratch with limited funding and resources, to race, and endure under extreme environmental and road conditions!
 - Outstanding presentation, thanks guys for coming out and sharing with us!.

- **Rich Hirschberg - Upcoming Events**
 - Rich gave an overview of the 6 upcoming events this summer, plus indicated we are signing up for the usual two National Drive Electric events
 - North Event Sat. Sept. 23rd and South Event Sat. Sept. 30th (Fox Valley Mall)

- **Marty Belovicz - Additive Manufacturing (with 3D printing)**
 - Marty covered a wide range of 3D printing technologies including:
 - FDM - Fused Deposition Modeling
 - SLA – Stereolithography
 - SLS - Selective Laser Sintering
 - Polyjet
 - And he described multiple applications for 3D printing in the automotive industry plus various 3D printer, materials and capabilities
 - Thanks Marty!

The meeting ended around 9:10 p.m.

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 Charter Business Members

<p>Chicago Area Clean Cities</p> <p>Samantha Bingham 2 N LaSalle St #950 Chicago, IL 60602 Email: info@chicagocleancities.org Web: https://chicagocleancities.org</p>	 <p>The logo for Chicago Area Clean Cities (CACC) features a blue oval containing a stylized cityscape with skyscrapers and a sun. The words "CHICAGO AREA" are arched above the oval and "CLEAN CITIES" is arched below it.</p>
<p>Chicago Area Clean Cities (CACC) is a 501(c)(3) not-for-profit working to promote the use of clean fuels for clean air in the Chicago area and throughout Illinois. Our coalition includes people from private business, academia, government, scientific research and energy and environmental services. Our main goal is to help with the adoption of cleaner transportation options.</p>	

FVEAA Business Members

<p>EV Converters LLC</p> <p>Rolly Waller 130 Windsor Park Dr, C121 Carol Stream, IL 60188 Cell: 630-865-5744 Email: rollywaller@gmail.com</p>	 <p>The logo for EV Converters LLC features a stylized black plug with a yellow lightning bolt extending from its cord. To the right of the plug, the text "EV Converters" is written in a bold, sans-serif font, with "LLC" and a trademark symbol below it.</p>
<p>EVC will become a Franchisor (when the US government approves the conversion rebate) to appoint Franchisees (eg, service stations, oil change shops, transmission shops, independent mechanics, etc.) to convert Internal Combustion Engine (ICE) vehicles to electric vehicles (EV).</p>	