



December 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 **December 8, 2023**
6:15 p.m. and will be IN-PERSON only PIZZA

Location:

Top Floor of ONE Arlington Apartments

MAP: 3400 W Stonegate Blvd, Arlington Heights, IL 60005

PARTY starts at 6:00 pm and will run until about 10pm.

Topic: FVEAA Annual Party

Time: Fri December 8, 2023 6:00 PM CT

Agenda

- 6:00 Front Door Opens
- 7:00 Pizza
- Bruce and Tracey playing bluegrass holiday music
- Rich with holiday EV trivia
- 10:00 Clean up

President's Words

Jeff Miller

November Meeting

Ted Liu provided his thoughts on the Tesla Magic Dock charging stations. He highlighted many of the challenges that I have been thinking about for a while, and a few new ones. It is awesome to see Tesla deploying this equipment to existing stations though, and we are definitely at a crossroads for fast charging in the US.

Jeremy McClean showed us his Delorean conversion in stop motion beauty. His robot did a

great job building the car for him. He also brought in a variety of pieces and parts, like his custom adapter plate, Kelly controller and fuses. His fuses were very scary as they were of a design that is usually maximum of 48 volts. Putting those across a 120+ volt battery pack is a good way to cause a fire. Fuses for DC voltages in excess of 48 volts tend to be sand filled. The sand is required to quench the arc and stop the flow of electricity. There is also some heat to be dealt with, and the sand filled fuses usually have a tough body that can deal with both the heat and forces of the fuse blowing. However, make sure that both ends of the fuse are connected to a solid platform, like a fuse holder. I have seen fuses hanging in the air fly apart when the fuse blows, allowing the conductors to short out against other things in the area. I am very happy he came in when he did, and I hope we can get together for a working session at his garage soon!

December Meeting

I am hoping many of us can attend the **December 8th Christmas party in Arlington Heights.**

Update on my very small electrical and mechanical company

I passed my Master Electrician exam! I am now a licensed contractor for electrical and hvac in most of Illinois. It's been a process, and amusing at times. I did the Master Mechanical test in September as the Naperville website listed it as required. When I called them to discuss getting the licenses in order, they were confused, and didn't know about that requirement! Fortunately it wasn't a very hard test.

Why did I do all of this? I recognize that moving most of our households off of fossil fuels is a journey. It's a long and expensive process, and many of our houses are lacking some critical pieces to get there. I feel like I can have an intelligent discussion about long term household goals, and how to achieve them in a cost effective manner. We can utilize the funding from the Inflation Reduction Act to help cover some of the costs. This requires planning as it's easy to max out certain elements, but if you spread it out over several years you can get far more of it paid by Uncle Sam. Every house and family are unique, and there isn't a single solution. The best plan is the one made just for you with your budget and goals in mind.

For those of you in Chicago and Libertyville, even though I can't do the work for you directly, I can certainly still apply what I have learned to help you formulate a long term plan. I do enjoy the planning part!

I will continue to learn new skills, and I suspect I will later learn about rating houses for air leakage. I am buying a blower door, duct blaster and duct air flow measurement system so I can properly understand those parameters before changing a house. The airflow through the ducts is especially important if you want to install a larger tonnage heat pump vs just AC.

The name of my new company is High Efficiency House LLC.

Vice President's Words

Looking forward to seeing everyone at the Christmas party. I know it will be a great event as always! To get you in the spirit below is an EV version of the song Jingle Bells I wrote a few years back you can sing with your family.

EV Jingle Bells

Dashing through the snow in a brand new id.4, O'er the fields we go, using gas no more. My uncle has an S, my wife drives a 3, it's nice to go so fast burning only electricity, Oh!

Chorus

**Jingle Bells, jingle bells, jingle all the way, oh what fun it is to ride in Santa's electric sleigh
Jingle Bells jingle bells jingle all the way, oh what fun it is to ride in Santa's electric sleigh**

Verse 2

When the reindeer pulled the sleigh, they made some extra juice, for when they slowed it down,
they regen'd through their hoofs,
The sleigh went through the sky, as quiet as can be, Rudolph had his nose so bright because he's using
battery! Oh *Chorus*

Verse 3

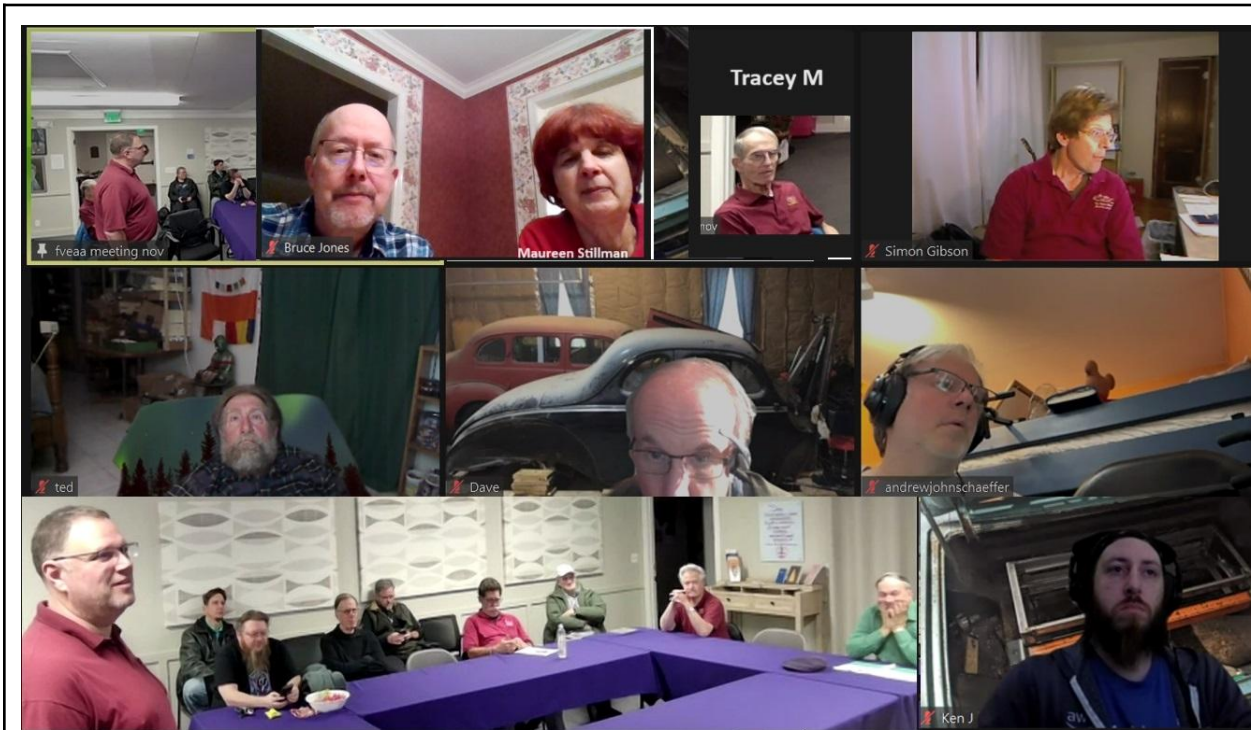
Around the world he goes, with no range anxiety, his new battery pack, is the 4680
When Santa leaves your house, he speeds away real fast, he straps into his big red sleigh and
engages ludicrous! Oh *Chorus*

Verse 4

Santa is a good man, he uses solar power, and charges up his sleigh, in just under an hour
When he's on the road, with no time to spare, he uses superchargers to make sure that he gets
there! Oh! *Chorus*

Verse 5

The sleigh is filled with presents, ones we'd love to see, I hope to get an etron or a Ford Mustang
Mach E,
I'd take a Rivian or a Nissan Leaf , But what Santa brought to me was a brand new red Imev! *Chorus*



11/17/2023 meeting attendees on-line and on-site in Geneva



Ted Liu provided an in-depth analysis of the Tesla Supercharger with Magic Dock technology and how that allows vehicles with non-Tesla charging ports to charge at Superchargers.



Various views of the Magic Dock port and conversion connectors



Jeremy McClean is now looking to finish the conversion of his DeLorean to an electric vehicle. His very clever video was made years ago showing a robot starting the conversion.

Gibson's Garage

Simon Gibson

Musings about Tesla Drive Units:

I've seen recently there is now a modification to delete the coolant manifold on the older, (2012-2015) Model S Large Drive Unit (LDU). Apparently this 'factory rotor cooling delete' revision no longer pumps coolant through the stator jacket preventing the infamous seal leak. This may be of interest to owners of older Model S Teslas and the EV conversion community. And of course to folks like me who have the Toyota RAV 4 EV, baby Tesla half breed vehicles!

The other area I've been looking at is the fact that some Tesla conversions require the drive unit to be reversed in its orientation with the consequence that the gear train inside

is running predominantly in reverse direction changing the overall thrust direction on the gear bearings. There are companies that manufacture alternative gear trains for these drive units so I'm wondering if gear sets cut with the helix in the opposite direction may be required?

And of course, the Toyota variant of the Tesla drive unit also has a parking pawl mechanism typical of automatic transmissions. This may also be of interest to the EV conversion community.



Upcoming EEvents - Winter 2023

Rich Hirschberg

The FVEAA Christmas Party

Friday, December 8th starting at 6 pm

One Arlington Apartments, 3400 W Stonegate Blvd.,
Arlington Heights, IL 60005 (Marty's place).

FVEAA will pay for pizza and salad. Plan to bring any other snacks &/or desserts. Food, fun, games, camaraderie, and maybe a surprise visit from the Magic Banjo Buddies, 😊

If you need charging, please contact Marty.

MAP: <https://www.apartments.com/one-arlington-arlington-heights-il/33fze9f/>

CACC Now IACT!

Ted Lowe

Our Charter Business member has broadened their focus to all of Illinois!

Illinois Alliance for Clean Transportation (IACT) (formerly known as Chicago Area Clean Cities) is a 501(c)(3) not-for-profit working to promote the use of clean fuels for clean air throughout Illinois. Our alliance 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

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

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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!**



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 2023-12-04 04:58:11

Website Registered User Statistics

Statistic	Value
Total Users	110
Users Never Logged In	39
% Active Users	64.5%
Ave. Days Since Last Visit	666.8 days

FVEAA On Facebook - Join Us! Like Us!

Ted Lowe

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!

Ted Lowe

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

We currently have **72 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 2023-12-04 04:58:10

Count of Members by Type

Membership Type	Count	Paid Up
Charter Business	1	1
Family	4	4
Individual	66	65
Lifetime	2	2
Totals	73	72

Other Statistics

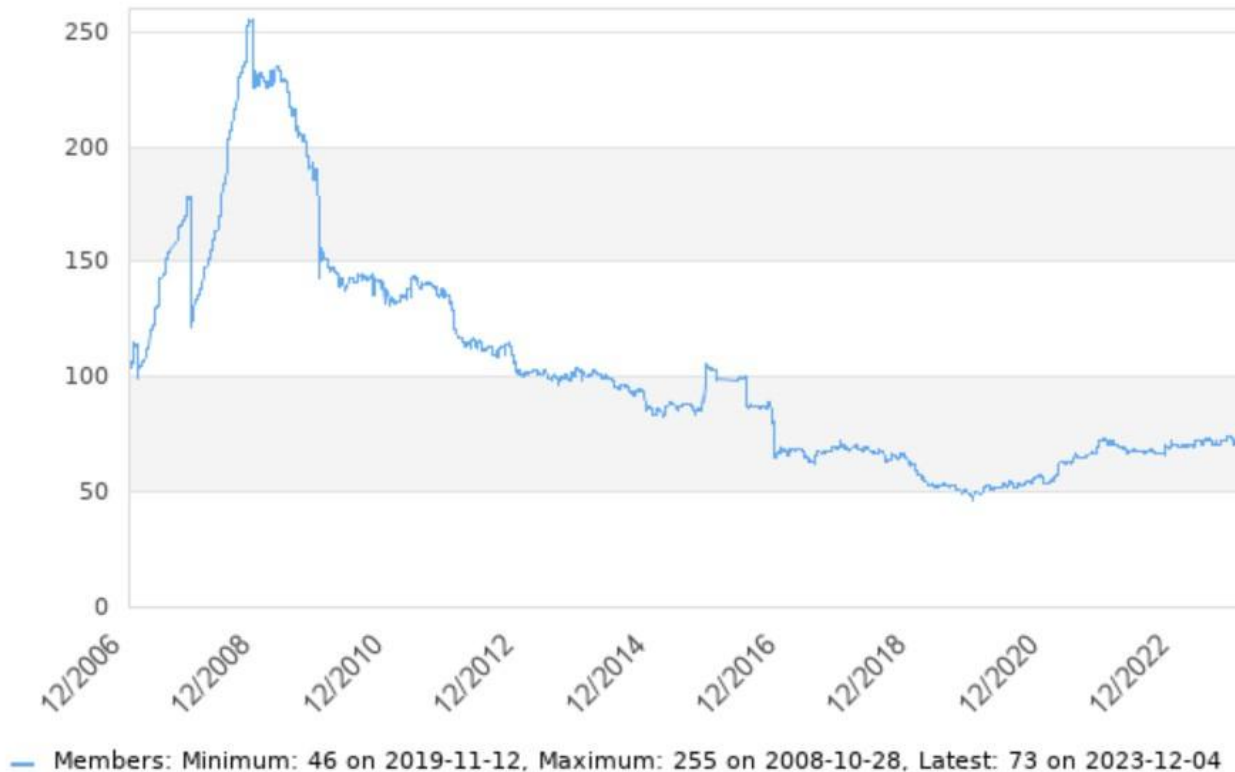
Statistic	Value
% Paid Up	98.6%
Avg. Paid Up Days	424.1 days
% With Email	97.3%

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 FVEA!!!**

FVEAA Paid Up Members as of December 4, 2023 12:11pm



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):

<https://www.fveaa.org/renew>

THANK YOU for your continued support of the FVEAA!

7:15 President Jeff Miller started the meeting and held introductions all around

TED LIU – TESLA MAGIC DOCK

- Ted Liu discussed the Tesla Magic Dock technology at Tesla Superchargers
- On a trip through Marion, IL he documented the Magic Dock at a Tesla Supercharging station
- He showed how the Magic Dock connector works
- And how various conversion plugs like CCS, CHAdeMO and combinations of them worked as well

8:05 Break

DELOREAN CONVERSION – JEREMY McCLEAN at jeremy mclean electriccatprod@yahoo.com

- Jeremy McClean provided a thorough update on his Delorean EV conversion that he started about a decade ago, discussing all aspects
- He played a video of his mechanical robot ... very humorous and clever showing stop-action motion of the robot tearing down the gas powered Delorean and converting it into an EV. Tediously well done!
- To finalize the build Jeremy is now discussing the technical aspect and possible assistance with technical build and electrical aspects
- Bruce suggested a good car interior shop:
 - Riggs Brothers interiors in Naperville
 - <https://riggsbros.com/naperville>
- Ken J shared the following for those looking to create a video from images
 - <https://stackoverflow.com/questions/24961127/how-to-create-a-video-from-images-with-ffmpeg>

DECEMBER 8th HOLIDAY PARTY

- (NOTE 2nd Friday in December!!) will again be at
- Marty Belovicz' Apartment complex in Arlington Heights.
- 3400 W Stonegate Blvd, Arlington Heights, IL 60005
- Times: 6:15 pm doors open to 9:00 pm finish up, out by 10pm
- FVEAA will provide the Pizza and salad, and folks can bring a side, snacks or dessert if they so choose.

FVEAA Membership Application Form - Version 2023-12-04

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 (1 year), \$38 (2 years), \$56 (3 years)
Business	\$100
Premier Business	\$250
Charter Business	\$500
Youth (21 or younger)	\$10

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

Illinois Alliance for Clean Transportation (IACT)

Samantha Bingham
2 N LaSalle St #950
Chicago, IL 60602
Email: info@il-act.org
Web: <https://il-act.org>



Illinois Alliance for Clean Transportation (IACT) (formerly known as Chicago Area Clean Cities) is a 501(c)(3) not-for-profit working to promote the use of clean fuels for clean air throughout Illinois. Our alliance 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.