



March 2017 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

March 17, 2017 7:00 p.m. to 9:30 p.m.

Community Christian Church

1635 Emerson Lane
Naperville, IL 60540

[Google Map](#)

Agenda

- 6:30 Doors open -> Sign-in Sheet
- 7:00 Call To Order, Welcome Introduction
- 7:15 Stephen M. Cutter, Founder of G-Ride an eco-friendly ride sharing company
- 8:15 Break
- 8:30 Club news and business.
- 8:45 Michael Willuweit - World of EVs: What to look for in 2017 and beyond
- 9:15 Close

President's Words

Michael Willuweit

This month I will be presenting on the the world of EVs. It was supposed to happen last month but when there's too much EV goodness for one meeting, the president's presentation get's bumped. In fact, this month I won't even be the keynote speaker. That honor belongs to Stephen M. Cutter an entrepreneur with a great vision who has founded G-ride, a ride sharing app that will only use hybrid and electric vehicles. To further their eco-conscious plan and reduce our carbon footprint they'll plant a tree with every ride. Sounds like a novel start-up and I hope we can offer some valuable insights to their company.

Back to our last meeting we had a wonderful update on the club sponsored electric Honda Insight dragster by John Emde. Seeing pictures of the project sure whet my appetite to see the Insight in action.

Bruce Jones, Bob Baker, and Michael Bradley detailed the Nissan Leaf battery pack hack they embarked on after our January meeting. It was a rich presentation full of great insights, thank you!

Bruce has written a little in the reinstall for this newsletter with some pictures from Bob's shop. Speaking of this newsletter, Rich Carroll has written a wonderful piece on EV adoption. He is truly a treasure to this club.

Our February meeting featured 7 plug-in vehicles, let's see if we can top that in March.

Hope to see you Friday!

Photos of Last Meeting February 17, 2016

Bruce Jones



Ted Lowe shows his 24V electric scooter gifted to him last year by Dennis Kreiner that he is converting to lithium power by repurposing an electric bicycle pack gifted to him years ago by Deny Doney.



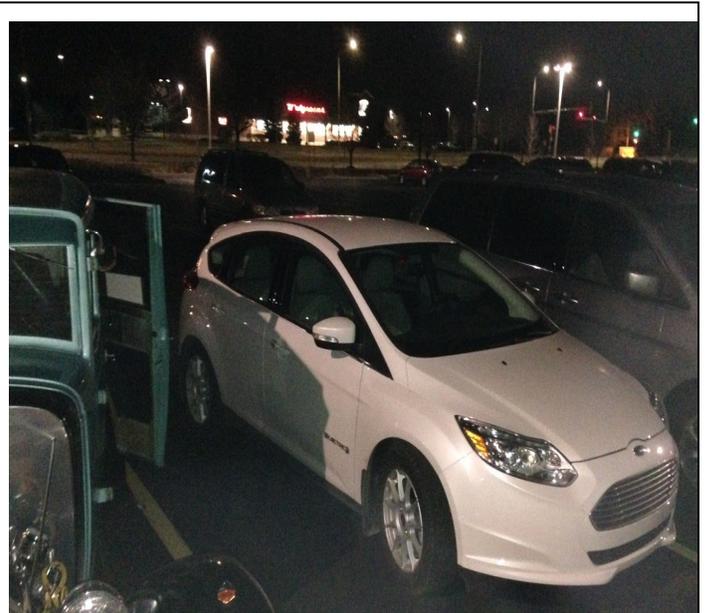
Michael Bradley of Best Hybrid Batteries



Gordon handles a used Leaf Battery Module



John Emde presents on the Insight project.



Rich's fully charged shiny Ford Focus Electric.



A Leaf and Volt getting juice.



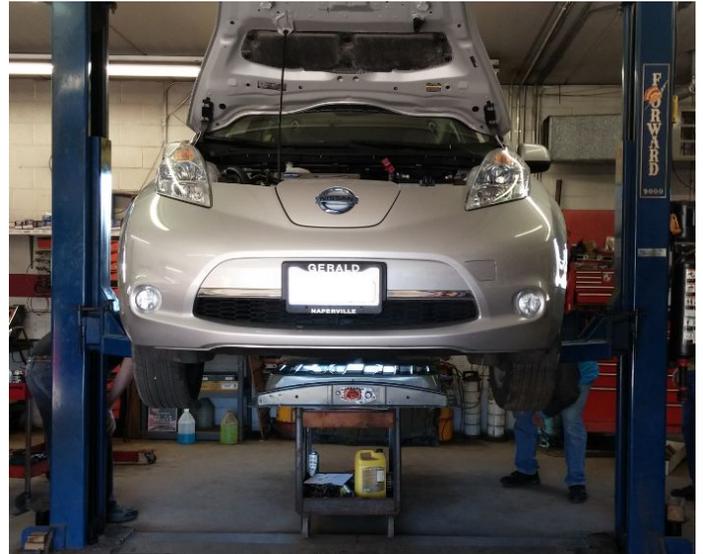
Fred's Smart EV and Bruce's Hupmobile

Bruce Jones' Leaf Battery Work Session on 2/18/2017

Bruce Jones

Background : Bruce Jones' used 2011 Leaf EV has range issues, so as we brainstormed at our Holiday party in December, this project was launched. I'm titling this project as: Investigation and repair of a range-limited Leaf EV battery pack. OR
PART 2 - RETURN OF THE BATTERY

Thanks again to Bob Baker for using his shop, and everyone who came to reinstall the battery!!



FVEAA Facebook Page - Like Us!

Grant Gerke

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

FVEAA Facebook Group - Join Us!

Ted Lowe

In October 2015, i created a Facebook group for the FVEAA and invited all the past and current FVEAA members i know that are on Facebook. There are 47 members so far. 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 will help to replace 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/>

Rich's Ramblings

Rich Carroll

The force may be strong, but we still have a mission. EVangelists have done lots of strong work, telling the

public about electric transportation options, showing some of the vehicles, giving rides, etc, but guess how far our mission of informing the public has gone. Well, we need to focus on the long road ahead, because the general public is not well informed. Altman Vilandrie is a strategy consulting firm, specializing in serving the telecom and tech industries. They recently published a survey, titled, "Survey: Lack of Awareness, High Costs Hamper EV Adoption." To summarize, they found very limited awareness by the public of EVs. In a question with multiple choice answers, about 60% of those queried answered that they had never heard of EVs or didn't know much about them. Eighty percent of those queried had never driven or ridden in an electric car. Only 3 percent owned an EV, and 10 percent planned to purchase one.

The STATED reasons for not buying an EV were pretty much what you would expect. Eighty three percent say they cost too much, 85 percent think the existing charging infrastructure is not adequate, and seventy four percent say charging takes too long.

EVs do appeal to younger and wealthier buyers. Of those surveyed making \$100,000 or more per year, 17 percent plan on purchasing an EV as their next car. Eighteen percent of 25-34 year olds say they will purchase an EV next.

Fortunately, there is some light in the future. Based on the Tesla Model 3's announced sales price of \$35,000, the survey indicated that if auto manufacturers produced models in that price range, the EV adoption would increase by 24 times the current market. Not only is that a dramatic number, that seems to be where many manufacturers already are. There are quite a few manufacturers in the \$30K to \$40K range, even before the \$7,500 federal tax credit. I believe we still have quite a story to tell.

Membership Update Ted Lowe

We currently have **68 active paid-up** members, **same** as last month! Please recruit new folks!



FVEAA Membership Report
as of 2017-03-13 04:58:04

Count of Members by Type

Membership Type	Count	Paid Up
BusinessStd	2	2
Family	7	7
Individual	57	56
LifetimeInd	3	3
Totals	69	68

Other Statistics

Statistic	Value
% Paid Up	98.6%
Avg. Paid Up Days	190.3 days
% With Email	94.2%

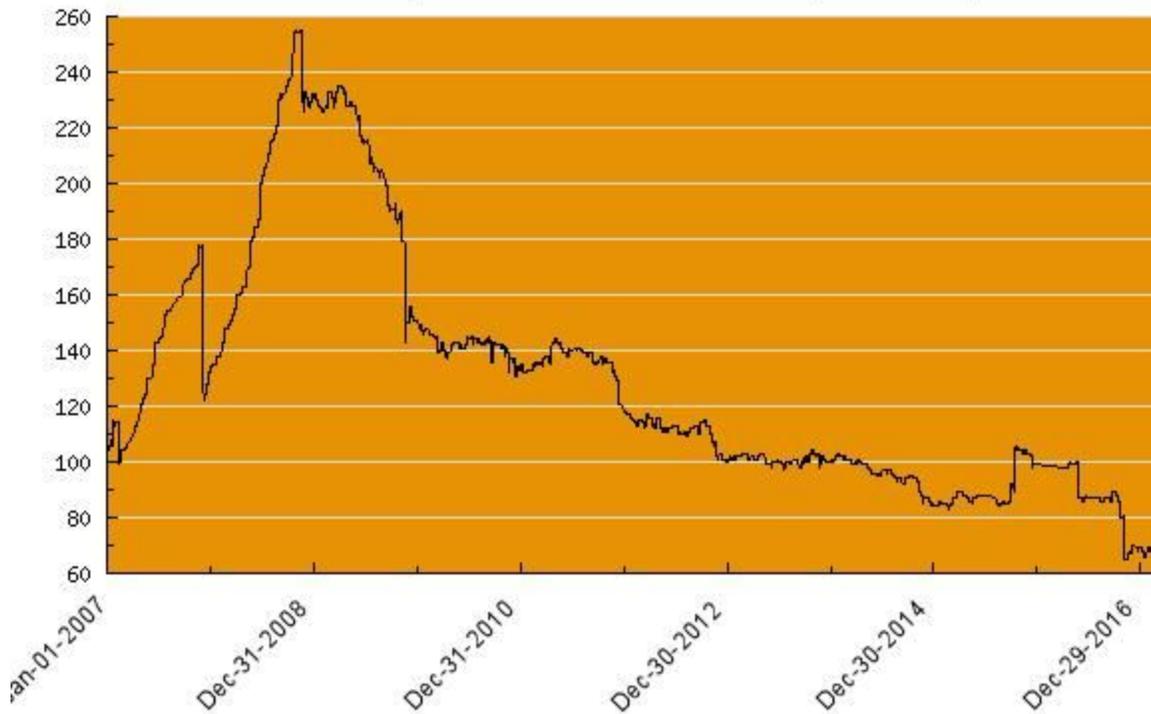
Encouraging Our Membership To Grow in 2017 and Some History Ted Lowe

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 EEvents. Volunteer to attend EEvents on behalf of the FVEAA (with or without an EV)! Your ideas on how to help grow the FVEAA are welcomed at anytime, 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 about 255

members in the Summer of 2008 when gas was nearing \$5 per gallon. We were also attending lots more invitational Events with our EVs. **Let's get out there and grow the FVEAA in 2017!!!**

FVEAA Paid Up Members as of March 13, 2017 4:04pm



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):

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

THANK YOU for your continued support of the FVEAA!

Meeting Minutes - Feb. 17, 2017

Bruce Jones

Here are the minutes from our February meeting

6:30 Doors open -> Sign-in Sheet

- 7:00 Call To Order, Welcome Introduction by President Mike Willuweit
- 7:15 Nissan Leaf Battery hack the pack by Bruce Jones and Michael Bradley
 - Bruce described the 1/21/2017 Leaf work session and thanked the group for helping pull the Battery out of his 2011 Leaf.
 - Special thanks to Bob Baker who led the event at his shop Bob's Hillview Auto in Lake Barrington.
 - The Leaf battery pack was given to Michael Bradley of Best Hybrid Batteries in Shorewood.
 - michaelbradley19@gmail.com
 - Mike handles battery refreshes - usually for hybrid cars
 - Michael then described what his company does and how it analyzes and cycles batteries in a

presentation "2011 Nissan Leaf Rebuild Project" He then covered:

- Anatomy of a Nissan Leaf Battery Pack
 - Leaf Battery Modules
 - Testing Results
- This was the first BEV battery that he has analyzed.
- These take longer because the packs are much larger than hybrids
- He used a parallel system to simultaneously test each of the 48 individual modules in the pack
- The modules are "dual" modules but they actually have 4 flat individual cells arranged as follows:
 - 2 cells in series, 2 of those in parallel
- 3.8V/cell (2s) = 7.6V
- 30 Ah/cell (2p) = 60 Ah
- Rated at 500 Wh
- He saw two kinds of degradation: 1) overall pack degradation due to either heat or other factors and 2) specific cell degradation
- Bottom line he replaced 4 modules and took the pack up to Bob's in Lake Barrington yesterday.
- Too early to tell yet what the results will be, but expect moderate improvement in range due to removal of weakest cells, and possible benefit of balancing pack.
- Tomorrow, 2/18 there is another work session to re-install the pack and see how it affects mileage etc. Another unusually warm day expected for winter tomorrow - in the mid 60's. Yeah!
-

- 7:45 John Emde update on Insight Dragster

John Emde once again amazed the group with his "insights" and conversion methods used on a Honda Insight to develop a Honda Insight electric dragster. Years ago John created an electric dragster that rocketed from 0 to 60mph in 1.1 seconds. No doubt this new mini electric dragster will also stun crowds and any competitor who dares challenge it in similar fashion.

- John began the process by removing all non-essential weight from the vehicle reducing it from 1800 pounds down to 750 pounds. He removed the 50 pound dash, seats, interior and installed a plastic lightweight racing seat.
- John even closed off the front grill to eliminate air resistance, replaced the front springs with lighter rear springs since there is no heavy motor to support, filled in air pockets and other tricks to make it fast and light.
- The Insight now has a new rear end— for rear wheel drive with 4:10 ratio from a small Chevy S-10 that had just the right width.
- Stopping required rear disc brakes with appropriate vacuum..
- The differential has a Mini spool for locking the wheels in place of a spider gear, so the wheels have equal rotation.
- The frame was steel reinforced for handling the force of electric power torque, and the forces from jolting back down from expected (and much anticipated) wheelies.
- Power comes from two NetGain 7" motors, one w chain drive to keep it in sync and provide its power.
- Special racing tires and slicks (he thanked the FVEAA for funding those!)
- Battery pack is a special 225 pound lithium ion battery rated 100C that will provide the 2000 amps necessary through a standard pot box with Zilla 2k controller send electrons to the motor.
- A 50 amp charger allows charging the batteries in only 10-15 minutes to recharge
- And overall the project is coming along fine, and if all goes well, this Summer we'll see John's mini dragster in action!

- Break
 - 8:30 Club news and business.
 - 8:45 World of EVs: What to look for in 2017
 - 9:15 Close
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- Bob Baker is having a Leaf battery working session tomorrow 2/18/2017 8:45 a.m. at his auto shop to put the updated battery back into Bruce Jones' 2011 Nissan Leaf. THANKS BOB!! Thanks also to Michael Bradley for finishing the work and running the battery from Shorewood to Lake Barrington.

Meeting Adjourned at 9:30 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



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—Daniel H., Hourly Pricing participant since 2015

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