

Charged Up



ELECTRIC VEHICLE ASSOCIATION OF SAN DIEGO (EVAOSD)

An affiliate of the Electric Auto Association (EAA)

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Regular Meetings: Our meetings are on on the 4th monday of every month (except December).

Location: California Center for Sustainable Energy
8690 Balboa Ave., Suite 100 · San Diego, CA 92123

Place: Main Conference Room

Next Meeting: Monday, March 28, 2011 @ 7:00 p.m.

Program: General Topics

Presidents Personals:

I am giddy with excitement! First, Baker Electric of Escondido called to schedule my charger and second SDG&E meter install. Then, I got notification of my LEAF coming next week. The Escondido Nissan general manager sounded excited too, his was also coming next week. While on the phone with him he said the first one they have sold is just driving off now. He also told me the name of the "tech" guy that is going to help me setup the car and show me all the widgets. I guess they will have to show me how to get it to talk to my home router and login to the nissan server so I can control it with my cool Nissan iPhone app.

Now, I just have to determine to lease or buy. The Nissan Dealer says lease because technology changes rapidly and if the vehicle is not worth a lot in the future, just turn the car in. If it's worth a lot in 3 years, then buy out the lease sell it and make the extra cash. My thoughts are all over the place. If this car is going to be hard to get for a while, that would demand a premium if I sold it. Could driving it for a while then selling it, push me to be electric carless again until that cash goes to a Tesla Model S? Tough choices, hard thoughts and a last minute coin flip will probably be the answer.

I will let you all know next month.

Inside this issue:

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From the Treasurer

I continue to enjoy watching the small “inventor” that figures out new and useful ways to use Electric vehicles. They are always looking for methods to improve the greater good for everybody, not just a few. This article is a perfect example of that “Inventor” spirit that takes some simple ideas and turns them into a useful tool with many applications!

Awesome Deliver-E trike is an electrified postal dream machine

Since the 1980s, the Australia Post has counted on the Honda CT110 to deliver letters across the continent. Simon Williams thinks it's about time for a change.

Williams, who invented the Deliver-E (say it out loud), thinks he's created the trike to replace the CT110 as Australia's "Postie Bike." With a pair of electric motors propelling the Deliver-E trike to a top speed of 50 miles per hour and the ability to run for 40 miles on a full charge, inventor, he might be right. Williams believes that the Deliver-E's stability, off-road ability, standard reverse gear and safety makes its far superior to the now-infamous CT110.

The Deliver-E's pivoting rear swing arms allow the trike to tackle small obstacles with ease and lessen the impact felt when hitting potholes. Williams says that the swingarms help the bike carve through corners and hop curbs.

There is one little problem before the Deliver-E brings postal goodness to people across Australia: money. To that end, Williams is looking to secure funding to turn his electrified postal machine into something more than just a dream.

With twin electric motors powering this new-age delivery trike to a top speed of 50 mph and nearly 40 miles of range, Simon Williams' Deliver-E concept is ready to – um – deliver the goods.



Williams is aiming his Deliver-E specifically at letter carriers (posties!) in his native Australia, to replace the CT110 Hondas currently in use there. The Deliver-E is more stable at a stop where carriers will have to support not only the weight of the stationary bike, but also shift heavy letterbags and parcels. The Deliver-E's 3 wheels allow the bike to stay up on its own, for greater safety and comfort. A reverse gear is included, so riders don't have to walk the thing backwards.

The most notable thing about the Deliver-E trike, however, is not its improvement over a relatively old-tech 110, but the pivoting rear swing arms that can articulate over obstacles and potholes, as well as lock in place. These rear swingarms let the bike carve through corners “naturally”, and help the rear get over curbs more smoothly. “The tilting mechanism was the thing I spent a long time thinking about,” Williams says. “Along the way I came up with all sorts of complex details on how I would get it to tilt. In the end, the tilting mechanism couldn't be more simple.”

Simple, durable, and fun to look at. DAMMIT! I want one of these, too!

Williams hopes to secure enough interest in the project to generate the financial support needed to begin production. It's just a great idea.

Changing Your Registration to Electric - Revisited

By Gerald Sullivan

You just finished converting your late model gasoline car to electric and have been enjoying the quiet, no gas, smog-free motoring. You figure that your troubles are over. Just wait until you get a notice from the DMV that your registration is due and it requires a smog test. No Worries, you figure. It can't possible fail as the car does not pollute. Well you will fail not because you are no longer a gross polluter, but you don't have all of the necessary equipment. Remember, you removed the gas tank along with the leak-proof cap, and the charcoal recovery tank. Strike one. You also removed the engine along with the EGR valve. Strike two. Also removed was the exhaust system with the oxygen sensors, catalytic converters, and the all important tail pipe. Where else can the examiner stick his sensor? Strike three.

Sharp eyed readers will remember this lead in paragraph I used in a previous article. I followed all of my advice in taking our conversion to the Bureau of Automotive Repair referee (1-800-622-7733 for appointment), then taking the car to the DMV for an examination and the paper work. All went fine and the clerk behind the desk reported that all necessary operations had been performed by the BAR referee.

I recently received my renewal notice for my 2011 tags. I was well surprised that I did not have to take the car for a smog test. This was the year that it should have been required. That was the good news. The bad news was that the MP field was still 'G' for gasoline. The MP stands for Motive Power. A search of the Internet did not list the various abbreviations that can be put in this field. Obviously G for gasoline, D for diesel, N for natural gas, among others. Seems that the registration change had not occurred after all.

So back to the DMV again with all my papers to see what happened. This time I was smart and made an appointment. Even though it was two weeks in the future, not having to sit for hours made it really worth while. When I got to the window and explained my problem, a nice clerk started to work on the problem. Would you believe it, the computer system decided to go down at that time. Eventually we got started again and the clerk went away to enter something into a different terminal. When she got back I questioned if it had truly been changed to 'E' for electric. When we looked at the papers it was 'Q' for hybrid. She said that she put in 'E' but the program overwrote the 'E' considering it to be Hybrid. I guess that when the program was written, all the electrics had been 'killed' by some big time company. I wonder what kind of headache will occur when the Nissan Leafs start arriving.

Back to the remote terminal she went, and after a short time, came back and showed me a printout with the proper 'E' in place. Now all of my ownership and registration papers had to be re-issued from Sacramento. Knowing how bureaucracy works, I had my current registration and title (pink slip) with me. They were all bundled up for sending to Sacramento and I was issued one of those funny red numbers that you put on the rear window. I guess that the reason for sending your title, is that if you ever were to sell the vehicle, the old 'G' would be a problem.

So, the bottom line to get your conversion properly registered is to 1) take it to the BAR referee, 2) have it inspected at the local DMV, and 3) take all your paper work to the DMV to get the registration changed. Insist on seeing the 'E' in the Motive Power field of the paperwork.

Can a Star Improve Electric Vehicle Mileage

By Lee Campbell

You may have read the article in the Union Tribune, “Too Cold? Too Hot? Electric Car Won’t Go as Far”. Besides knocking the Chevy Volt (advertised as ‘More Car than Electric’) because of its low battery range in cold weather, it implies that EVs are not ready for prime time because in extreme temperatures “... batteries are like people: they love room temperature”.

The Volt uses [sandwiched aluminum fins](#) between the cells that carry a coolant around cell surfaces. Throughout charging the [liquid is preheated](#) as needed to condition the battery while the car continues to be connected to the grid. The cabin climate system can be preconditioned during charging also. This can be pre-programmed or can be set through a mobile phone app. So at the time the vehicle is disconnected from the grid the batteries and people should be loving it as they begin to zip silently and smoothly along the electric highway. But for both to stay happy energy has to continue to be supplied to the both climate systems. When driving, the batteries power a heat exchanger that is employed in combination with a ‘chiller’ to dissipate the heat. The Volt implements the gas motor/generator to supplement (or replenish) the battery output when it is very cold. Whoops! There goes the mileage. So what can be done to satisfy the need for battery and human climate control that will minimize the drain on electric mileage?



The 2011 Prius has a small solar panel in the roof that is used to keep the cabin cooler by circulating air. 3Prong Power of Berkeley,



Calif., which specializes in giving Priuses longer electric-only range state, that a [solar array can improve mileage](#) up to 10%. Another company, [Solar Electric Vehicles](#), adds solar roofs to hybrids and claims it can improve fuel economy on the Prius by up to 29%. The energy from the [solar array covered roof of Fisker Karma](#) is used to keep the car's battery charged and to cool the interior while it's parked. The [Solar Jackets project](#), a non-profit student competition team at the Georgia Institute of Technology, adds solar cells to a car's roof and hood to charge the batteries for the 12-Volt auxiliary system, which includes electric power brakes and steering, headlights, and radio. But all come with a cost.

However, it does appear that the electric auto business is moving toward the using the power of the sun to improve vehicle mileage. As advances in solar cell size, efficiency, and cost evolve, it is very likely that we will see more use of solar assisting for EVs until it becomes a standard and it should help make the Volt more EV than a car.

Learning About Lithium

Dan Wolfson passed along a video with an EXCELLENT explanation of the lithium chemistry battery and how it works. There has been a growing divide in the lithium battery community about whether a BMS system is really needed. I am going to stay out of the debate seeing as I design and build BMS systems. The biggest problem with the BMS systems I have seen is a lack of engineering and safety placed into the devices. Something I have concentrated literally years of brain power on.

So watch the video, learn about lithium and when it's time for you to switch, you will be one ounce more in tune with understanding who's on first... third base.

http://www.ri.cmu.edu/video_view.html?video_id=60&menu_id=387



ELECTRIC VEHICLE (EV) CONVERSION WORKSHOP (ONE DAY MINI-COURSE)

Description: The workshop will go over the basics of a Gas to Electric Vehicle conversion with a focus on the EV sub-systems needed for a do-it-yourself conversion. Instruction will include hands-on activities on dynamic EV mock-up platforms. In addition previously converted EV case study models will be available for test rides.

- Date: Offered on the first Saturday of each month
- Time: From 9:00 AM to 1:00 PM
- Cost: \$75.00 (includes materials and lunch)
- Location: Kick Gas Co-Op, 815 University Ave, San Diego CA 92103
- Website: <http://kick-gas-club-electric-conversions.com/>
- Contact: quevedo@cox.net or jasonrugs@yahoo.com to pay registration fee

** Space is limited **

PUFF da mechanical DRAGON



Electric Vehicle Coop Garage quevedo@cox.net



Electric Auto Association (EAA) Membership Application Form

Fill out this form, attach a check, money order or use PayPal, in US funds only, payable to 'Electric Auto Association'. CE = Current EVents newsletter

e-CE [] \$35 USA & other Countries [] \$25 Student [] \$25 Senior (>65-USA/Canada only) birth year []

paper CE [] \$45 USA [] \$48 Canada [] \$52 World [] \$29 Student [] \$29 Senior (>65-USA/Canada only)

[] \$120 (supporting level-1) [] \$240 (supporting level-2) [] \$500 or more (high voltage) [] do not list my name

I support the _____ EAA Chapter (additional chapters, \$10 each) _____

[] (\$10each) Additional Chapters or Special interest group (other than the one that comes with the membership)

You can fold this form as indicated and mail it with your payment enclosed. Use tape to seal the form, on the sides, before you mail it or send an e-version of this form, through PayPal using http://electricauto.org/eamembership.html

[] New Member [] Renewal

Name [] email []

Mailing address (Apt. #) [] Home phone []

Mailing City, State & Zip-8 [] Work phone []

[] Electronic version of Current EVents, paperless only, link sent by email, if your membership was for the e-version, that is what you will receive

[] Do you own or [] Lease an electric vehicle (plug-in) [] production [] conversion [] bicycle [] hybrid or [] None

please include miles driven and type of vehicle []

All information in this application is for the exclusive use of the EAA and not sold or given to any other organization.

Please identify your primary areas of interest relating to the EAA (check as many as your wish

[] Owner/Driver [] Hobby/Builder [] Professional/Business [] Competition (Rallies, Races, Records [] Plug-in Hybrids

[] Environmental/Govt. Regs [] Social (Rallies, Shows, Events [] New Technology & Research [] Solar & Wind Power

[] Promotion & Public Awareness of EVs [] Student or General Interest [] Electrathon/Bicycle/Scooter/Other

The Electric Auto Association is a non-profit, 501(c)(3) for the promotion of electric vehicles. Your donations are tax deductible and with your membership you will receive the EAA publication, "Current EVents". All information and statistics in this application are for the exclusive use of the EAA and is not sold or given to any other organization or company. Your membership dues include a percentage goes to the EAA Chapter you support for public Electric Vehicle promotion EVents like rallies, shows and EV rides.

Current subscribers have borrowing privileges for the association's video tape and publications library. Subscribing to the newsletter is optional and is not a requirement for membership. EVAOSD meetings are always open to any and all interested parties. New Subscribers, please use this form to register to receive the EVAOSD Newsletter. Current Subscribers, please use this form to send us any change in your details.

Please make check or money order payable to: EAA and reference EVAOSD. Send this form and payment to: Lloyd Rose, EVAOSD Treasurer; 2755 Dos Aarons Way, Suite A, Vista, CA 92081

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