

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 times are changing. For this summer we are on the 4th monday of the month.

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

Place: Main Conference Room

Next Meeting: Monday, Oct. 25, 2010 @ 7:00 p.m.

Program: General Topics

REview Month:

Thanks again to Mitsubishi for bringing out the iMEV to our club meeting for test drives and a presentation!

I have driven a lot of EVs and I have to say the iMEV was a personal favorite. I just liked the fit, finish, and feel of the vehicle along with how it drove. I do agree with Lloyds review of the Leaf (see From the Treasuere) and felt it was an excellent ride also. Finally, third test this month was the Chevy Volt. Besides all the hub-bub about whether it is a true electric car or not is still up for debate. We did verify that the GAS engine does indeed apply power to the wheels along with making electricity. So, not exactly the pure electric drive we were hoping for.

Thanks to the CCSE again for hosting the Volt ride and drive event. here is my assesment and pictures:

I waiting in line. I waited in line a LONG time (1 hour and 12 minutes). Mike Ferry gave a good speech while I was in line so that killed some time.

Once I got in, I was kinda overwhelmed with tech widgets. The displays on the dash were lit up like a video game with glowing green bolts of electricity. They told me when power was going from battery to motor then back during regen with beautiful animated graphics.



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How was the drive? Eh... it was ok. From a stop it had good acceleration, but from 30-50 MPH it was kinda doggy. Handled well and has a very nice fit and finish. I like the looks of the Volt the best out of the new "electric" cars, but I hate gas. So for now, I am happy to still be on the waiting list for the Nissan Leaf. It will be tough when the Mitsubishi iMEV comes out not to want that one too...



Also, how did Lloyd get to drive before me? Don't they know who I am?!? Oh, he had an appointment.

Ecotality Update

I know a lot of you are waiting to hear the latest so here we go. I finally got through to a person at Ecotality to talk about my complaint of the installation being too pricey, using out of state contractors, and overall unhappiness. I was quickly uplifted when they told me they would send out a new electrician group, from Escondido, to give me another estimate. I was also told they are no longer working with the contractors that came out and did my assessment. As soon as I get the latest bids, I will let you all know. So that free charger might once again be free!

From the Treasurer:



At long last I was finally able to get a test drive of the LEAF and thought I would make some comments.

In the recent past Nissan had invited hundreds of people to Japan to check out the production-ready Leaf electric vehicle, and Nissan has begun a much smaller effort in launch markets in the U.S., thus far conducting test drives in San Diego and Los Angeles, California.

There are plenty of reviews around the Leaf as a car and Nissan let me behind the wheel for about half an hour but even just on surface streets I was able to get close to 50mph. That's enough to concur with much of what has been said so far – the car is quiet and peppy, manages hills with little effort and has a nicely balanced suspension that is both smooth and comfortable while being responsive around corners and negotiating traffic. It was Easy to drive and innocuous to look at, it's what you imagine "They Might Be Giants" had in mind. I also disagree with a couple of the criticisms floating around, and find them worth clarifying here: The motor is not at all "Tinny Sounding" unless that manifests only at high speeds, the Leaf is actually one of the quietest EVs I've driven. While it felt like the interior was boring in its minimalism, I thought the relatively monochromatic palette felt light and airy and suited the car. Given the exterior, something sportier would likely seem out of place. It's also through this fact that the Leaf's true point of distinction begins to emerge – any extra attention you might have paid to more dynamic interior features is absorbed by the instrument panel and "infotainment center". Put simply, the Leaf has the best user interface I've seen in an electric vehicle (EV) yet.

In fairness, I haven't seen much of what some of the other automakers are working on in this regard, so I won't attempt any comparisons. And frankly, I can't speak much to the entertainment part, as I spent most of my time checking out the "touch screen Information". What quickly became clear is that the Leaf uses information as a "lure" – both to lure in new EV drivers by quelling range anxiety and other initial fears, and to enable the geeks and hypermilers with the data they want. All in a package that's pleasant to look at and easy to navigate and understand.

With this in mind, I've picked out a few of the Leaf's most useful features, from my perspective as an experienced EV driver- and noted a few things for wish-list !

Driving Radius



Recognizing that range is the core concern for new EV drivers, Nissan makes sure to let the driver know in myriad ways exactly how far he can go at any given time. This starts out with a graphic portrayal on a map (my map isn't terribly detailed because half of it is literally in the ocean), with the radius reflecting drivable distance on a charge as well as charging stations in the area. If your destination is outside the circles, you know right away to charge along the way or re-think the trip. Veteran drivers know that after a while this becomes intuitive, but it's helpful nonetheless, particularly for folks just cutting their EV teeth.

Power Use Gauges

This will likely be the favorite screen for most drivers. All EVs have a power use gauge of some sort, on which their drivers focus – initially out of necessity, then, as they become more comfortable with the car's range, out of interest. Ultimately, the gauge is used to maximize range, often in competition with other drivers; the EV crowd was hypermiling long before the word made it into common vernacular. Still, there are always questions about how much energy the HVAC system uses, or radio, or headlights, even though most accessory use won't affect range, and even climate control is a distant second to one's right foot. Threads on EV forums delve into whether it's better to use AC or roll down the windows, and so on. While most drivers never see their battery's "state of charge" gauge hit "empty", the more adventurous among us have all eked out the last few miles to the next stop in a sweltering car on the off chance that a little air conditioning might make the difference between getting there and not.



The Leaf answers this and then some. It has not one power use gauge, but three, covering the propulsion motor, climate control, and everything else. Each measures and displays in kilowatts, which the veteran drivers will love after years of more vague indications. They're each laid out and function like a speedometer – mash the pedal or crank the accessories and the needles rise accordingly. Even better, the same screen displays not only how many miles are remaining on a charge (updating constantly based on power use) but how many miles you'll gain or lose by turning on climate controls. No more guesswork, and no Ph.D. required, either.

For the wishlist: less related to the power use gauge as actual power use, but most EVs (and some drivers) focus too much on regenerative braking. Successful long-range drivers know that the most efficient braking is that which you never have to do. In many cases, letting regen slow the car instead of "freewheeling" only means you'll end up using more power to speed it back up again. The Leaf has what I think is a nice, but not overly strong level of native regen – about the same as the EVs of the 1990s. However, the RAV4 EV had a button on the shifter through which it could be disengaged completely to enable coasting on the freeway, etc. Drivers loved it and automakers would be well-served to deploy such a feature in their new EVs.

Charger Listings



CHARGER Listings is a rather obvious feature, but a new convenience for this generation of cars. With a tap on the screen, the Leaf displays all of the nearby public charging stations. Even better, you can customize the list with your own locations that might be available to you but not considered "public," say a workplace or friend's house.

For the wishlist: all of the centralized charger reports to date that have been curated by EV drivers who, among other things, send in "condition reports" when they find a charger that is inoperable, vandalized, etc. Given the telematics on these vehicles, that could be done right from the charger list, alerting both the site owner and the rest of the driving community.

Running on Empty

EVs have all had various warnings and limp modes, but they've been largely akin to figuring out what a gas car really means when it hits "E." In the Leaf, it's downright predictable: when 4kWh remain in the battery, the car chimes and the "nearby charger" screen automatically comes up. At 2kWh, the car will automatically shut off climate control and any other unnecessary accessories, and limit top speed. Finally, it will enter a "reduced power" mode as your final suggestion to pull over. And, in a last effort not to leave anyone stranded, drivers can even eke out another mile or so through a reserve tapped by shutting the car off and on again, in case of an "I can see the charger but just can't quite make it" moment.

Time to Charge/Driving Efficiency

Probably most useful for new drivers, both the infotainment screen and the instrument panel behind the steering wheel have modes that display the actual charging time required to fill the vehicle on both 120v and 240v. This bit can also be switched to display driving efficiency in miles/kWh, a nice supplement to the power use data, and extremely handy should you need to know how far those last 2 kWh will take you.

For the wishlist: To start with, 6.6 kW charging (basically, a standard 240v/40 amp circuit – what's in most houses and public charging stations today). Every freeway-capable EV of the last generation charged at this level, but for reasons I've yet to hear, every EV of this one charges at 3.3 kW, basically rendering all those circuits half as fast. Less of an issue for the PHEV/EREVs, but will likely impact the consumer experience on the pure BEVs. Luckily, Nissan is already talking about upgrading the Leaf for Gen II, but we're awaiting confirmation and whether or not Gen I will be retrofittable.



Of course, these features and nuggets merely scratch the surface of all that is possible in the Leaf and other upcoming EVs, but what I've seen so far is exciting. The best part about it is that none of it seems imposing. The system provides information and all sorts of information, but ultimately leaves the consumer to decide how he wants to drive and use the vehicle. If, as we've seen with the Prius, more data leads to efficient drivers who also love their cars, then let there be no end to this particular addiction. I look forward to the Next Generation and the Future!



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 ****



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

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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/eaamembership.html

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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)

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

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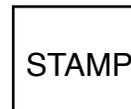
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Please make check or money order payable to: EAA and reference EVAOSD. Send this form and payment to: Lloyd Rose, EVAOSD Treasurer; 2755 Dos Aarons Way, Suite A, Vista, CA 92081

EVAoSD Newsletter

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