

NORTH BAY CHAPTER



Electric Auto Association
Promoting Electric Vehicles Since 1967

MAY 2013 EDITION

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THIS MONTH'S NBEAA MEETING

May NBEAA Meeting

Saturday, **May 11th**, 10 AM – Noon; ***THUNDERSTRUCK MOTORS, 2985 Dutton, unit 3 in Santa Rosa.***

Dave Malloy will describe his battery management system

FUTURE NBEAA MEETINGS

FUTURE MEETINGS:

June: Open to suggestions

July: The SF Bay LEAFs are still interested in having a joint meeting. It is now looking like it will be in July, but I don't know the exact day or location, yet. I'll keep you informed.

UPCOMING EV EVENTS:

Driven To Perfection: May 25th from 10AM until 4PM at O'Reilly Media, 1007 Gravenstein Hwy N in Sebastopol. This is a fundraising event for the Sebastopol Area Senior Center. Most of the cars at the show will be vintage ICE cars, but the organizers want to have one each of a variety of EVs. If you are interested in showing your car, please refer to my email of 4/13/2013 that has the registration forms. The \$25 registration fee has been waived for EVs.

EV NEWS

Report on the Day On the Green Show & Tell:

On April 13th, several NBEAA members participated in the Day on the Green show & tell event at Montgomery Village. We had all of the currently available EVs as well as the original RAV4 EV, two Ford Ranger EVs and John Palmerlee's conversion so the public had plenty to see. There were crowds checking out the EVs and asking questions for most of the afternoon so we were able to impress a lot of people. Thanks to everyone that participated.

Community Outreach – Sonoma Country Day School by John Palmerlee

On April 9th, I drove my converted Toyota Pickup EV to Sonoma Country Day School where both my children, Ellen and Michael, spent their middle school years. Kristen Sorensen, their 8th grade science teacher, had invited me to present our converted EV to the class and discuss electric cars in general.

I started out with the question: Why Electric? I didn't expect an answer – but the question is always out there. I'd heard one of the students asking questions about the term "efficiency" when I was talking with the Headmaster before getting started, so I started off with that part of the answer to *Why*.

The meaning of ICE was core to the discussion, so I spelled that out for the kids, and mentioned how it is used by EV drivers. I could then use the acronym in my talk, making it easy to define vehicle types. "When someone fills up their ICE car at a gas station, at close to \$5 per gallon, what most people don't understand is that \$4 out of \$5 of those dollars go out the window as heat – not used in any way to move the car forward. That's 20% efficient." I talked about EV efficiencies, and how much it costs per mile for EVs and ICEs, and particularly how much it costs to "fill" up an EV – using the Leaf and the pickup as examples. They seemed impressed that a leaf could go about 75 miles on \$2.50.

There was a AAA battery on my desk while I was planning the presentation, so I picked it up to see how much energy it held. The NIMH battery showed 1.2 volts and 850 milliamp hours. That comes very close to one watt hour capacity! Excited to have a unit measure for watt hours to show the kids, I took it along. During my talk, it made for a nice visual - I stated that a Leaf battery pack holds the equivalent of 24,000 of the little AAA batteries like the one in my hand.

I talked a little about where you charge when you have an EV, and noted how many chargers were being installed in Sonoma County. I gave the class one of the fold-out brochures for the Model S and the "Charge-Up" guide to EV's (both from the National EV meeting last month). I expect these will be inspiring eye-candy for the students.

The slide presentation showed some really basic procedural steps to the pickup conversion, good background for taking a look at the truck in the parking lot, which we did afterwards. When I was done, one boy with particular interest in the project came to me with a question like, "It looks so much more complicated than I thought... I've built my own computer, but I'm not sure I could do the EV project." I loved the question, and told him without reservation that once he learns about each part and how it hooks up, it won't really be more difficult than building a computer. Being familiar with the parts in a computer, he's confident with them.

SCDS has a huge (I estimate well over 300 KW) solar array just recently installed, and they are installing two Level 2 charging stations donated by one of the local Nissan dealer owners who sends their children to the school. I'm so encouraged to see a local organization taking such proactive steps.

Community Outreach – Orchard View School by Alan Soule

On April 10th, I taught a technology class at Orchard View School in Sebastopol about wind resistance. Orchard View is an Independent Studies charter school so the ages of the students in the class varied from 14 to 17. I, first reviewed the drag formula, $\text{Drag} = \text{Coefficient of Drag} \times \text{Frontal Area} \times \text{Velocity squared}$ and showed photos of vehicles that have low coefficients of drag and ones that have high coefficients. It seemed as though most of the students understood the formula from the questions that they asked but what really drove it home was the demonstration. I rented a powerful fan and had a toy Tesla Roadster and Tonka muscle truck that were the same scale. The teacher, Jessica McCready, had a vernier scale so we could accurately measure the drag on each of the vehicles. The truck had 3X the drag of the roadster so the students were impressed. They all made the comment that they are going to get aerodynamic cars.

PG&E's EV Rate Structure

A PG&E representative confirmed that the EV rate structure will be implemented in June of this year. It sounds like the policies haven't changed from when it was presented to us at our July 2012 Chapter meeting.

BYD Motors Opening a Plant in the U.S.

The first Chinese-owned vehicle manufacturer in the U.S. unveiled ambitious plans Wednesday to eventually build as many as 1,000 plug-in electric buses a year at a refurbished RV manufacturing plant in a wind-swept corner of the Mojave Desert.

UPDATE ON NEW CHARGING STATIONS IN THE NORTH BAY

New Level II's up and running (Repeat from last month):

(3) Level II J1772 on the Town Green in Windsor (Chargepoint) (in Huerta Gymnasium parking lot on the north side of the Town Green)

(1) Level II J1772 at the library in Rohnert Park (Chargepoint)

(2) DC Fast Charger (CHAdeMO) at the Petaluma Visitors Center, Lakeville St, just south of Washington (Blink, Ecotality).

Planned Installations:

County installed chargers in Petaluma, Healdsburg and Cloverdale. After these are up and running, chargers are planned for Guerneville, Doran Park and maybe Sea Ranch.

Note: The City of Santa Rosa charging stations are now pay stations and require a Chargepoint card.