



ELECTRIC VEHICLE ASSOCIATION OF SAN DIEGO (EVAOSD)

An affiliate of the ELECTRIC AUTO ASSOCIATION (EAA), 2031 Ladera Ct., Carlsbad CA 92009 Ph: 760.753.2949

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Regular Meetings: 4th Tuesday of every month (January thru November), at 7:00 pm,
Location: San Diego R.T.C. (Pearson Kia), at 4001 El Cajon Blvd. and Interstate 15
Place: In the Autotorium
Next Meeting: Tuesday, April 24, 2007 @ 7 p.m. (the 4th Tuesday)
Topic: EV conversions and C2EC2T Workshops in 2007 by Abràn Quevedo

The President's Message

With our March EVAOSD meeting Joseph Gottlieb discussed Zap Neighborhood Electric Vehicles (NEV) and gave his prospective on the direction of the EV market. During Joseph's presentation there was some give and take with a visitor; I was pleased to learn that this was the first person to purchase a Zap NEV pickup from Joseph. Additionally we had some new EV to check out Michael Kadie brought his Cobra EV that is built for speed, David Dahl brought his S-10 EV with tilt-up bed and Abràn Quevedo brought one of his homemade EV scooters. It was another night to get charged-up about EV.

The first 2007 EV Conversion Workshop is filled up so Mr. Q is starting registration for the 2nd C2EC2T workshop to be held July 30 to Aug. 10. With limited space for our downtown San Diego location we need to cutoff for the second registration at 20 participants. http://home.att.net/~NCSDDCA/EVAoSD/EVworks_hopflyer2007.pdf Abràn Quevedo wants to include all EVAOSD members before the enthusiasm from

Earth Day activities and higher gasoline prices attracts people to fill the 2nd C2EC2T Workshop to capacity.

Yes, Earth Day is coming on April 22, 2007 and we are seeking your help and participation for this busy time of showing our EV and sharing the knowledge. Stop by and visit our Clean Car Shows when you attend any of the Earth Fairs.

This is a busy time of year as we charge ahead sharing the EV knowledge and exchanging ideas. Come to the meeting for the latest EV news.

Our April meeting we will be discussing several aspects about our San Diego Area Earth Fair EVents and discussing EV Conversions. We will be networking and exchanging info about "Current EVents."

I look forward to seeing you at our meetings, perhaps in an EV.

Bill Hammons, President EVAOSD

The EV Grin

"EV'ers know about the grin that someone has just after driving an EV." Here are some notes for the San Diego EV Community.

Calendar of Events:

4/14/07 Poway Earth Arbor Day & Clean Car Show
9 a.m. – 2 p.m. - Lake Poway Recreation Area.

4/15/07 North County Earth Day Celebration/Pepper Tree Day & Car Show, 11 a.m. – 4:30 p.m., Mission San Luis Rey, 4050 Mission Ave., Oceanside, CA

4/16/07 10 – 3 PM UCSD Clean Car Show all EV are welcome and encouraged to participate.

4/22/07 37th Annual Earth Day Worldwide Celebration

4/22/07 San Diego Earth Fair & AFV Parade "Cool the Earth" – 10 a.m. – 5 p.m., Balboa Park, San Diego, CA "The world's largest annual environmental fair and Earth Day Celebration – produced by volunteers," www.earthdayweb.org/.

4/24/07 EVAOSD Meeting – EV Conversions

4/29 – 5/2/07 Hydrogen & Fuel Cell International Convention & Trade Show – Vancouver, Canada

5/18/07 Bike-to-Work Day

5/22/07 EVAOSD Meeting – TBD

6/8/07 SDRFC Meeting – Climate Change

6/16 & 17 Enviro Fair at the San Diego County Fair

7/2 -13/07 & 7/30-8/10/07 Commuter Conversion Electric Car Class for Teachers (C2EC2T) an EV Conversion Workshop

<http://home.att.net/~NCSDCA/EVAoSD/EVworkshopflyer2007.pdf>

10/3/07 National AFV Day Odyssey

12/2-5/07 EVS 23 in Anaheim, CA www.evs23.org



SAVE THE DATE: Thursday, May 17, 5:30 to 7:30 pm, The Prado Ballroom, Balboa Park

Join Environmental Activist & Actor **Ed Begley, Jr.**, (www.livingwithed.net), Elected Officials and Business Leaders from throughout San Diego for a cocktail reception to discuss "**Street Smart Transportation: Alternative Fuel Vehicles & Their Promise for A Sustainable Energy Future.**"

The fund raiser will benefit the San Diego Regional Energy Office's **Energy Independence in Transportation** programs. Tickets are \$125 per person. Info: 858-244-1177

An EVAOSD partner, the San Diego Regional Energy Office is a 501(c)3 non profit corporation dedicated to promoting the adoption of clean, reliable, renewable, efficient and sustainable technologies and energy practices.

Note that checks or PayPal payments for EVAOSD need to be made out to EAA with memo indicating that funds are intended for EVAOSD. Our day-to-day function stays the same EAA is helping with our banking and non-profit status.

To prepare this newsletter we use items that we find on the internet and to share the knowledge. In accordance with Title 17 U.S.C. Section 107, this material is distributed without profit to those who have expressed a prior interest in receiving the included information for research and educational purposes.

EVAOSD Gives Thanks to all that help us down the road...

Dedicated people like you are EVAOSD's greatest asset. We appreciate your support and extra efforts...

Thanks to Russ Lemon and Kevin Taylor for donating equipment & time to meeting presentations.

Joseph Gottlieb, for his March EVAOSD meeting presentation and handouts.

Everyone that is supporting our Earth Day Activities with their cars and/or attendance.

Thanks to Chris Jones for giving us access to www.evaosd.com.

The following members & associates that are "Taking Turns" with updates that are not in the mainstream media.

**ALTERNATIVE
FUELS & VEHICLES**



NATIONAL CONFERENCE + EXPO 2007

**ANAHEIM, CA
APRIL 1-4**



The convention is over so let's share the knowledge. Presentations are to be posted on the www.afvi.org website. The following quotes were heard by the attendees... **Fuel for your thoughts...**

"Each time you pull into a filling station, turn the rear-view mirror and look into your own eyes. Now you know who's paying for this war.", ex-CIA chief Jim Woolsey.

Former Congressman Pete McCloskey said, "You have an opportunity to affect the future." As he spoke of Global Warming and went on to say that this is the best time to act since the 1970's when both parties worked together to pass laws such as the Clean Air Act on which the U.S. Supreme Court ruled on April 1.

An unknown source quoted Dr. King in his final speech when he said; "Sometimes when it is dark enough, you can see the stars" this reference was made suggesting individual action towards climate solutions.

"Lift up together and end our oil addiction," Terry Tamminen, former secretary of CalEPA and advisor to Gov. Arnold Schwarzenegger. He went on to say, "Convince at least 12 people that this is the most important decision they can make.

I believe that it was Oilman Boone Pickens who said, "This country was not built on reducing anything. What we need is to increase gasoline prices and make our own fuel.

Tamminen's dream, "Ten years from now, all the fuels we promote are considered mainstream, and oil is an alternative fuel."

Jim Woolsey's metaphor went something like this with notes in (). Conventional car 23 MPG (Model T was 25 MPG); Hybrid Prius 50 MPG (actual mid 40 MPG); Plug-in hybrid 100 MPG (Tour del Sol '06 104 MPG minus electrical energy = 86 MPH); PHEV on E85 say 1,000 MPG (100 * 6.67 = 667 MPG). But it was the thought that mattered. (If the PHEV stayed the speed limit and held up several SUV from going 85+ MPH; perhaps 1,000 MPG credit could be acknowledged.)

Annalloyd Thomason, AFVI Director quoted Gandhi as saying, "You must be the change you wish to see in the world." She went on to say, "This will happen one decision maker at a time."

James Taylor of Kansas City says that his signature line is, "Now I used to think that I was cool running around on fossil fuel; until I saw what I was doing was diving down the road of ruin."

Feel Good Cars is now ZENN an acronym for Zero Emissions No Noise; it could only be an EV.

Despite the challenges we have the ability to act. "This country is the bedrock of innovation", said Jim Woolsey, that has put us in position to deal with transportation both from a national security and global warming position.

Jim Woolsey offered this sobering analogy on the Middle East oil dependence. "To depend upon this part of the world for 97% of our transportation needs is sheer madness," Woolsey said. The world uses 1,000 barrels of oil per second, and the U.S. uses about 250 barrels every second, according to Woolsey.

CARB is to announce the recipients of approximately \$25 million in grants for alternative fuel projects in CA on April 12. The funds are to be encumbered by 6/30.

There are more than 500,000 cleaner gasoline "partial-ZEV" vehicles and more than 80,000 PZEV on the road in CA today. According to CARB estimates, about 130 FCV; 4,400 functioning BEV; and 26,000 NEV have been placed into service to meet California's requirements.

On the regulatory front, CARB's "Zero Emission Vehicle Program is being reviewed with expert review panel's finding to be presented at the May board meeting. Look for PHEV to be in the program.

Taking Turns ' - - -, _ _ _ Messages from our members . . .

[Russell Lemon says check out the EV design web page at...](http://NCSDCA.home.att.net/EVAoSD/design.htm)

<http://NCSDCA.home.att.net/EVAoSD/design.htm>. And while you are visiting the EVAOSD website take a look around and see what Russ has been doing. New links featuring vehicles and blogs from you EVAOSD friends.

[Several EVAOSD members are working on Battery Management Systems...](http://home.earthlink.net/~evtkw/)

<http://home.earthlink.net/~evtkw/> is a good source until Lee Campbell or Bob Van Gorder have completed their systems and are able to share the knowledge. Tim Wong writes the following on his website:

I had been happily driving my electric car, a Soleq Evcort, for a few months when I found that my vehicle range had dropped, based on the voltage sag under acceleration current load. After some investigation, I found that I had two batteries that had reversing cells so that their voltages were dropping from a nominal 6+V to 2.5V! This is, of course, not good for the batteries (they never recovered). In retrospect, I should have broken the car in - it had been sitting for a long time. Anyway, the following is a record of my battery monitoring system.

[From Paul Scott, Greenhouse gases are pollutants: US Supreme Court...](#)

April 2, 2007 So CARB can regulate emissions after all. Just in time for the May board meeting.

The US Supreme Court ruled Monday that the Environmental Protection Agency was wrong to refuse to consider greenhouse gases as pollutants, in a blow to the Bush administration.

"Because greenhouse gases fit well within the Clean Air Act's capacious definition of 'air pollutant' we hold that EPA has the statutory authority to regulate the emission of such gases from new motor vehicles," the court ruled.

Led by Massachusetts, a dozen states along with several US cities and environmental groups went to the courts to determine whether the agency had the authority to regulate greenhouse gases such as carbon dioxide emissions.

[The Automotive X Prize: Ladies and Gentlemen, Start Your Ingenuity...](#)

by Joel Makeover FeedBlitz [feedblitz@mail.feedblitz.com]

The Automotive X Prize is coming out of the gate this week, a high-profile competition aimed at jumpstarting the somnolent automotive industry to produce high-mileage vehicles, and lots of them. The Draft Competition Guidelines, released today at the New York Auto Show, describe the myriad criteria the cars must meet -- performance, fuel economy, emissions, creature comforts, and all the rest. Getting the competition rules right has been a mammoth job to date. I've had the privilege of... For the rest of the story go to http://makower.typepad.com/joel_makower/2007/04/the_automotive_.html

[Larry Emerson has an EV news link to share...](http://autos.yahoo.com/green_center-article_161/) http://autos.yahoo.com/green_center-article_161/

Back from the Dead? The Future of EV Powered Cars. Jon Alain Guzik, Editor-at-Large, Yahoo! Autos



It's a sunny afternoon and I am doing yet another lap on the famed Laguna Seca Raceway right outside of Monterey, California. I've driven here before - usually in something small, sporty and insanely fast.

I've done hot laps in sports cars with a pro behind the wheel, dived deep into turns 8 and 8A - the famed Corkscrew - and watched many race here.

But today is different. I am behind the wheel of a vehicle that won't be available anytime soon at a dealership. It is one of only two vehicles in the world and is, in fact, one of the most expensive cars I have ever driven, hand's down, in my life.

What could this be? It's not a sports car but it is the future...



Thanks to Paul Scott – Just a dream for now...

ZAP-X will seat seven and offer serious zero emissions performance. AKA Lotus's 635bhp EV

These are the first official pictures of American engineering firm ZAP's radical new electric crossover. Under development by Lotus Engineering, the ZAP-X is closely based on Lotus's APX concept from 2006.

And be sure to help celebrate Earth Day 2007...

EarthFair 2007, "Cool the Earth," marks the 37th Earth Day celebration, April 22. There will be several "clean" car shows around the county leading up to the main event. Organizers call EarthFair the largest, free annual environmental fair in the world.

April 14: Poway Earth Arbor Day, 9 a.m. to 2 p.m., Lake Poway Recreation Area, 14644 Lake Poway Road.

April 15: North County Earth Day Celebration/Pepper Tree Day, 11 a.m. to 4:30 p.m., Mission San Luis Rey, 4050 Mission Ave., Oceanside.

April 16: UCSD Clean Car Show, 10 a.m. to 3 p.m., University of California San Diego, Warren Mall.

April 22: EarthFair 2007 Cleaner Car Concours and Caravan, 10 a.m. to 5 p.m., Balboa Park. Caravan, 10 to 11 a.m.; free. Information: www.earthdayweb.org.

This marks the end of our printed & mailed newsletter this story and additional EV related stories are available in our electronic edition at www.evaosd.com under the [Meetings](#) information.

San Diego Bus to Get ISE Series Electric Drive Powered by a 5.9-Liter Dedicated CNG Engine

The San Diego Metropolitan Transit System is contributing a 40-foot, compressed natural gas-fueled New Flyer bus as Southern California air quality agencies are backing the installation of a series hybrid electric drivetrain — fueled by a clean natural gas engine that's far smaller than what a full-size nonhybrid bus would need. A 5.9-liter B Gas Plus engine from Cummins Westport will power the vehicle's new hybrid drive train from ISE Corp. More info – [Fleets & Fuels](#)

Phoenix Motorcars who will be in San Diego on April 22 in Balboa Park...

In response to the demand for quiet, earth-friendly vehicles, Phoenix Motorcars is in initial development production for two distinct markets: fleet and consumer.

Fleet Sales:

Our primary 2007 focus is on fleet sales to companies, organizations and agencies in California needing economical, energy-efficient, zero-emission, mid-sized sports utility trucks (SUTs) and SUVs. To pre-order a Phoenix SUT, please send your contact information to fleet@phoenixmotorcars.com.

Consumer Sales:

In late 2007, a limited number of vehicles will be released to selected consumers in California. If you would like to be considered for this select group and would like more information, please send your contact information to waitinglist@phoenixmotorcars.com.

In 2008, we will release consumer versions into the California market.

Production Estimate:

We estimate a sales production of 500 vehicles for 2007 and **6,000** vehicles for 2008.

SUV Model



Plug-In Hybrid Electric Vehicles: The near-term solution

- Plug-in hybrid electric vehicles (PHEVs) can dramatically decrease American dependence on imported oil, reduce greenhouse gases and other air pollutants, as well as lower fuel costs for American consumers.
- PHEVs use the same technology as the popular hybrids on the road today, but have a more powerful battery that can be recharged in a standard home outlet.
- PHEVs are outfitted with a battery pack sufficient to power the vehicle from 20 to 60 miles on battery charge alone.
- Since half the cars on America's roads are driven 25 miles a day or less, a plug-in with a 25-mile range battery could eliminate gasoline use in the daily commute of millions of Americans.
- PHEV technology is already available and functioning. DaimlerChrysler has developed and is testing a prototype PHEV commercial van with a 20-mile all-electric range. Conversions of existing hybrids ranging from sedans to SUVs are on the road today, demonstrating that the technology works.
- PHEVs can be manufactured with flexible fuel engines, magnifying the economic, environmental and security benefits while also benefiting American agriculture.
- An "electric" equivalent gallon of gas will cost 70-80 cents at prevailing electric rates versus the \$2.00+ national average gasoline price.
- The electric infrastructure is in place and available. Over 40% of the generating capacity in the U.S. sits idle or operates at a reduced load overnight when most PHEVs would be recharged. Our power system could charge tens of millions of PHEVs without requiring new plants.

Fight for American Independence

PHEVs can:

- Reduce dependence on foreign oil
- Decrease greenhouse gas emissions for vehicles
- Lower fuel costs
- Make American agriculture a fuel source
- Save and create American jobs
- Increase use of renewable energy

ZAP-X will seat seven and offer serious zero emissions performance. AKA Lotus's 635bhp EV

These are the first official pictures of American engineering firm ZAP's radical new electric crossover. Under development by Lotus Engineering, the ZAP-X is closely based on Lotus's APX concept from 2006.

A sleekly styled seven-seater, the X is intended to use a new and advanced type of battery that will give the car an extraordinarily long range for an electric car, and an unusually short charge time. ZAP claims a range of 350 miles and a charge time of just 10 minutes.

The car's proposed combination of all-alloy construction, powerful in-wheel electric motors and advanced battery management systems has been described as "potentially very interesting technology" by a source close to the project.

ZAP claims the X will produce 635bhp from its four in-wheel electric motors, resulting in a top speed of 155mph and a 0-60mph time of 4.8sec. That would put its performance on a par with super-saloons such as the BMW M5.

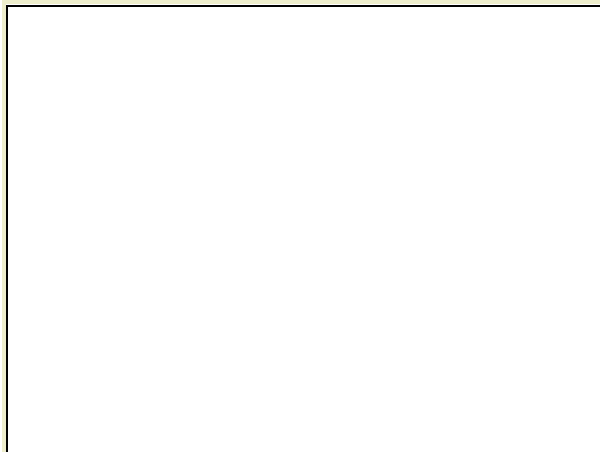
The car also features technology such as solar cell windows that provide power to heat and cool the interior. Inside, the car will be fitted with a wireless network, USB ports, high-definition video screens and a PC.

But although it's possible to build a battery that can be charged in 10 minutes, the infrastructure to make them on a commercially-viable scale doesn't yet exist. The technology is progressing so quickly that mass-manufacture of this type of battery is several years away. That means we're likely to have to wait until at least 2010 for the ZAP-X to appear in production form.

MONDAY, APRIL 9, 2007

Silicon Valley V2G Plug-in Hybrid Demo

Sen. Barbara Boxer attended a Silicon Valley Alternative Energy Summit today and PG&E was there with its plug-in hybrid Prius.



[Green Wombat reports](#) on the Vehicle to Grid (V2G) capability demonstrated by PG&E.

The modified Toyota Prius was plugged into a into a standard PG&E meter outside Advanced Micro Devices's Sunnyvale headquarters. As the car's lithium ion battery powered a bank of lights and a portable heater, the meter began to run backwards.

Add some solar panels to the mix and you've got the makings of a comprehensive policy: prioritize renewable electricity, plug-in cars and V2G. I hope Sen. Boxer had an epiphany.