

Charged Up



ELECTRIC VEHICLE ASSOCIATION OF SAN DIEGO (EVAOSD)

An affiliate of the Electric Auto Association (EAA)

2755 Dos Arons Way, Suite A, Vista, CA 92081

Ph: (760) 670-3388 Fax: (760) 266-9505 Email: EVAOSD.Newsletter@DriveGasFree.com

Website: www.evaosd.com

And we're on Facebook (search on EVAOSD)

Officers:

President: Joseph S. Gottlieb

Vice President: Lloyd Rose

Treasurer: Richard Rodriguez

Secretary: David Crow

Program Chairman: Staff

Newsletter Editor: David Crow

Webmaster: Russ Lemon

Librarian & AV: Lloyd Rose

Monthly Meetings: During the 4th week of the month, day depends on venue.

(No Meeting in December).

Meeting Location, Date and Time:

Center for Sustainable Energy

9325 Sky Park Court, Suite 100

San Diego, CA 92123

Wednesday, 29 June 2016, 6:00 P.M.

Program: Summer Social, Car Show

Newsletter Topics:

New App in Town



Another 200 Mile EV



Electric Flight from NASA



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Message from the President

Hi All,

Don't miss our Summer Social this month. It's a great chance to talk to EV enthusiasts, get some technical issues discussed, and determine the future direction you want to see the association head. Also, now is the time to buy your EV. California is likely to kill the electric vehicle rebate. It's not dead yet, but the money has to make the budget or Gov. Jerry Brown needs to find another way to entice people to buy an EV.

Just last week, I was on my way down to the airport (along with picking up a co-worker) and we parked at Aladdin parking on Kettner in their EV zone. The EV zone has a bunch of standard outlets (with marked stalls) that you can connect up your portable EVSE. They turn them on at midnight and off at 6am. So over 2 nights, I got fully charged (I kept checking my Nissan App to make sure). The parking isn't the least expensive, but it allows me to keep using my diminishing range effectively. Yeah, there was some %\$*! gas car parked next to me (in the marked EV zone), but I decided to take the high road and leave his tires fully inflated. Hope to see you at the social!

-Joseph



New Solar Panels at the San Diego International Airport

Mobilizing the EV Revolution - Electric Car Buyers Guide App on Kickstarter

Jun 10, 2016, 12:37 ET from Electric Car Insider

SAN DIEGO, June 10, 2016 /PRNewswire/ -- Electric Car Insider magazine announced today the development of an interactive mobile EV Buyers Guide app for IOS tablets and mobile devices. The app helps people interested in electric cars learn about electric vehicle technology and find a car that fits their budget and lifestyle.



The new multimedia app version of the EV Buyers Guide has instructional video, audio podcasts, interviews and image gallery slide shows providing views and details not possible to include in print.

Publisher Christopher Alan explained that the motivation for creating the app was to increase awareness and education of electric cars and other electric vehicles. "A majority of drivers in North America are not aware of the benefits of driving electric cars despite the fact that electric cars are substantially less expensive to operate than cars that use gas. EVs cost less for fuel and maintenance, and with tax and other incentives, actually cost less to purchase or lease than gas cars."

Alan estimated that the digital app will help tens of thousands of people interested in driving zero emission vehicles to make the switch from gasoline to electric transportation. "More electric cars on the road will improve air quality and reduce the nation's dependence on foreign oil" he said.

The company is taking [advance orders on the Kickstarter.com website](#). Backers of the Kickstarter campaign gain early and discounted access to the product and other rewards which are listed on the project's Kickstarter web page.

The 2016 Kickstarter campaign is the second for Electric Car Insider magazine. In the 4th quarter of 2014, the company held a successful campaign to fund the development of the print edition of the 2015 EV Buyers Guide, raising nearly \$12,000 to distribute the magazine through Barnes & Noble in the US and Chapters/Indigo in Canada.

Next Nissan LEAF Will Have 200 Mile Range

June 21st, 2016 by Steve Hanley, www.GAS2.org

The Nissan LEAF is a pretty good car. It has all the features that people like about electric cars. It's roomy, comfortable, reliable, fun, and economical. It is the best-selling electric car in the history of the world. And yet, it's range is just too short to suit many drivers.



Nissan IDS concept Electric Car

Make that the perceived needs of many drivers. The current base-model LEAF can only go about 80 miles before it needs to be recharged. Since most people add a mental fudge factor of about 20%, the practical range for the car is around 60 miles. After that, or approaching that, people start to experience the dreaded range anxiety.

Nissan now offers the LEAF with a larger 30 kWh battery that is good for 107 miles of range, but that is still short of what many people consider necessary before they decide to spend their own money to buy an electric car. There seems to be an expectation in the marketplace that an electric car needs at least 200 miles of range before ordinary drivers will consider trading in their conventional cars for electrics.

All Teslas have at least 200 miles of range. The top of the line Model S 90D is now rated at a tick over 300 miles. The base model of the upcoming Model 3 will go 215 miles between charges, the company says. The Chevy Bolt due in showrooms by the end of this year will feature 200 miles or more of range.

If you want to sell electric cars today, especially in the US, where people typically drive further than people in other countries, you better be able to tell customers they can have 200 miles of range if you want to have any hope of selling them in quantity.

Do people really need 200 miles of range? Not really. Statistics show the average American drives fewer than 40 miles a day. Since electric cars start each day with fully charged batteries after being plugged in overnight, the Nissan LEAF should have more than enough range for most people. But perception is reality. The perception is that we need 200 miles of range. Throwing statistics at people won't change very many minds.

This past week, Autoblog Green spoke with Kazuo Yajima, Nissan's global director of EV and HEV engineering at an electric vehicle conference in Montreal. Yajima confirmed that a LEAF with a 60 kWh battery is on the way. "It's coming," he said. "I'm sorry I cannot say when." A 60 kWh battery pack should give the LEAF 210 to 220 miles of range. "In the near future, I believe, we can produce an electric vehicle that doesn't have any driving range problem," he said.

The next question is when Nissan will update the styling of the LEAF. The current car has been on sale since 2010. Never a lovely design, it is definitely starting to look dated today. Nissan showed off its IDS concept last fall, a design laden with fairly heavy-handed design touches.



Tesla Model 3 with 200 mile Range, March 2016 "Unveiling" Version

For some time, the rumor has been that the second generation will go on sale in 2018. By then, it will have stiff competition from the Chevy Bolt and Tesla Model 3. The first-generation LEAF was a decent car. It was sort of a two-base hit kind of vehicle. But if it is going to go head to head with Chevrolet and Tesla, the second-generation LEAF will have to be at least a home run. The Tesla Model 3 looks like it is going to be a grand slam.

NASA X-57 Experimental Electric Airplane

June 18th, 2016 by Steve Hanley , www.gas2.org

NASA is working on an electric airplane that can carry up to 9 passengers and cruise at 175 miles per hour. The heart of the innovative design is a unique wing with 14 propellers driven by electric motors. 12 of the propellers are used during takeoff and landing while 2 larger ones move the plane forward during normal flight.



NASA experimental electric airplane, nicknamed “Maxwell”

The airplane has been assigned the designation X-57 by the Air Force but is known internally as “Maxwell” in honor of James Clerk Maxwell, the 19th century Scottish physicist who did groundbreaking work in electromagnetism.

NASA Aeronautics researchers will use Maxwell to demonstrate that electric propulsion can make planes quieter, more efficient and more environmentally friendly.

As part of a four year flight demonstrator plan, NASA’s Scalable Convergent Electric Propulsion Technology Operations Research (SCEPTOR) project will build the X-57 by modifying an Italian-designed Tecnam P2006T twin-engine light aircraft.

An advantage of modifying an existing aircraft is that engineers will be able to compare the performance of the proposed experimental airplane with the original configuration, says Sean Clarke, SCEPTOR co-principal investigator at NASA’s Armstrong Flight Research Center in California.

Tests have shown that distributing power among the multiple motors creates more than double the lift at lower speeds than traditional systems. NASA hopes to demonstrate that such a system will result in as much as a five times reduction in the energy required for a private plane to cruise at 175 mph.

Energy efficiency at cruise altitude using X-57 technology could benefit travelers by reducing flight times and fuel usage. It could reduce overall operational costs for small aircraft by as much as 40%. Typically, to get the best fuel efficiency an airplane has to fly slower than it is capable of. Electric propulsion essentially eliminates the penalty for cruising at higher speeds.

It also eliminates one source of pollution from the skies. Internal combustion engines for general aviation still run on leaded gasoline.

California lawmakers unplug the state's electric car program

Liam Dillon and Chris Megerian, www.latimes.com , 24 June 2016

California's electric-car rebate program, which has helped put thousands of Teslas, Nissan Leafs and Chevrolet Volts on the road, is running out of money.

In the state budget passed earlier this month, Gov. Jerry Brown and lawmakers eliminated \$500 million originally proposed for the subsidy program and other low-emissions initiatives – the result of a political impasse.



Without the funds, the electric-car subsidy, which has helped Californians purchase 150,000 low- and zero-emission cars since 2009, has hit a roadblock. Thousands of consumers applying for the incentive each month now are pushed to a waiting list.

Unlike most budget cuts, the decision to slash funding isn't due to a lack of money. Instead, the decision springs from concerns over the long-term viability of the state's cap-and-trade program, a major source of funding in California's efforts to combat climate change.

Some environmental advocates are worried that behind-the-scenes political negotiations between Brown and legislative leaders have led the state to hold onto the money as an incentive for lawmakers to reach a deal later this summer on extending the cap-and-trade program, which is facing legal questions over whether it can keep operating past 2020.

"I think it's ridiculous to play politics with kids' lungs," said Dean Florez, a former state senator and member of the California Air Resources Board, the agency that regulates greenhouse gas emissions.

The clean-car subsidies get their cash from auctions that are part of cap and trade. The program functions by capping how much greenhouse gas can be emitted into the atmosphere and requiring oil refineries, manufactures and other companies to obtain permits, each allowing 1 metric ton of emissions. Those permits can be purchased at auctions or traded in a market, a system intended to provide a financial incentive to reduce emissions.

Although the latest auction of permits produced almost no revenue, the state had previously stockpiled \$1.4 billion in the fund. Some of that cash is left over from last year, when the governor and lawmakers also were unable to reach an agreement on how to spend it. "With the urgency of the climate crisis, we really shouldn't delay in investing in projects that reduce emissions," said Bill Magavern, policy director for the Coalition for Clean Air.

A Brown administration spokeswoman didn't directly address questions about the use of existing climate change dollars as leverage to extend the program. But the governor does want a new law to ensure cap and trade's future.

"An extension will not only provide market certainty, but will ensure ongoing funding for clean-energy programs, especially in vulnerable communities," Brown spokeswoman Deborah Hoffman said.

The clean-vehicle programs are essential to the state's ambitious climate change goals. Air Resources Board Chairwoman Mary Nichols has said all internal combustion engine cars must be off the road by 2050 to meet Brown's target of drastically reducing greenhouse gas emissions by that time.

Currently, 3% of cars sold in California are zero-emission models – the highest percentage of any state. Even so, Brown has lamented that the pace has lagged far behind the state's needs.

In 2009, the state began subsidizing consumers who wanted to buy cleaner cars. Currently, the state offers rebates of up to \$6,500 toward the purchase or lease of new vehicles that run on electricity, plug-in hybrids and fuel cells. The 150,000 cars on the road subsidized by the program include 33,000 Chevrolet Volts and Sparks, 29,000 Nissan Leafs and 25,000 Tesla models.



More recently, the state added two incentives also funded by cap-and-trade dollars for low-income drivers in the San Joaquin Valley and Los Angeles to buy new and used clean cars.

Programs targeted to these residents are considered particularly important not only because they struggle to afford electric cars, but also because they're often stuck behind the wheel of older, dirtier vehicles that cause more pollution. Coupled with other state subsidies, low-income residents in those regions can receive as much as \$13,500 for a new electric vehicle.

The program managed by the San Joaquin Valley Air Pollution Control District has taken hundreds of cars 20 years and older off the road in favor of electric vehicles and hybrids.

A few months ago, Gabriel Lua, 31-year-old mail carrier for a San Joaquin Valley school district, purchased a 2013 Chevrolet Volt to replace his 1987 Honda Civic. The Civic had been giving him exhaust headaches and made him worry about the health of his children, ages 3 and 5. Even though the Civic had failed the state's smog test three times and was costing him hundreds of dollars a month in maintenance, Lua said he couldn't afford to replace it until he learned about the incentive program. The state covered more than half the new car's price tag. "It saves me gas. It saves me money. I feel safer. And most important, it's for my kids," Lua said.

Seyed Sadredin, the executive director of the San Joaquin Valley Air Pollution Control District, said cars and heavy-duty trucks make up more than 65% of pollution in the valley. The clean car incentives are indispensable to meeting the region's climate change goals and its requirements under the federal Clean Air Act, he said, but the district expects to drain the last of its \$6.4 million for incentives within the next two months. "That could be devastating to our efforts," Sadredin said.



Any San Joaquin Valley residents applying for vehicle subsidies now get placed on a waiting list, as do those seeking similar dollars in Los Angeles.

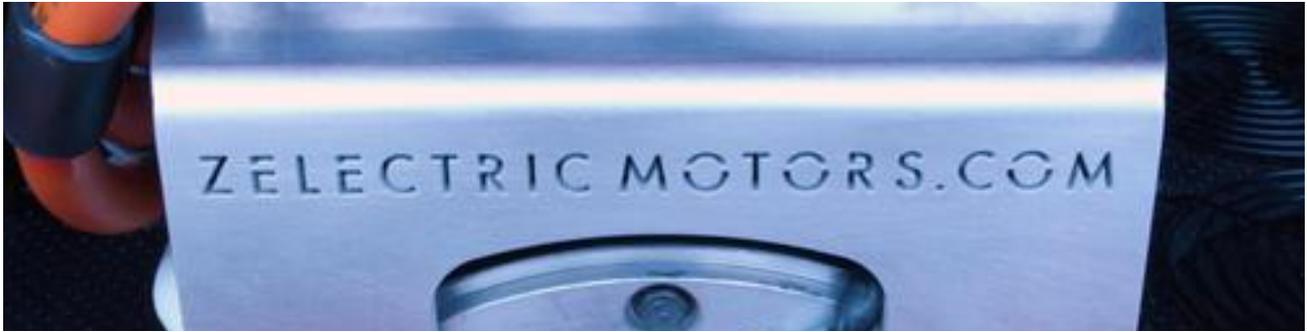
Automobile industry representatives also are concerned about the funding problems. Carmakers signed agreements with the state committing to the production of cleaner vehicles with the understanding that public dollars would go toward incentive programs, said John Bozzella, president and chief executive officer of Global Automakers, an umbrella group representing the U.S. divisions of 12 motor vehicle manufacturers. "If you're measuring based on the requirements in the [zero-emission vehicle] program, the numbers are very low," Bozzella said. "And that would suggest to us that you need every tool in the toolbox."

Earlier this year, officials were expecting a different plan. In January, Brown proposed spending \$500 million on low-carbon transportation programs in the coming year, including \$230 million on the primary low-emission rebate program for consumers and \$30 million to expand the programs targeted to low-income residents in the San Joaquin Valley and Los Angeles. The new dollars were supposed to get 100,000 additional clean cars on the road.

Even if Brown and lawmakers reach a deal, it's unclear what the ultimate dollar amount might be. During budget negotiations earlier this month, a Brown administration finance official told a legislative committee that significantly lower than expected revenue from the most recent cap-and-trade auction contributed to the decision to hold back the cash.

But others, including Senate leader Kevin de León (D-Los Angeles), said the existing cap-and-trade money should be spent as soon as possible.

"Every time we don't spend money, more carbon is emitted into the atmosphere," De León said.



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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

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\$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) _____

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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.

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