

Charged Up



ELECTRIC VEHICLE ASSOCIATION OF SAN DIEGO (EVAOSD)

An affiliate of the Electric Auto Association (EAA)

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Secretary: David Crow

Program Chairman: Staff

Newsletter Editor: David Crow

Webmaster: Russ Lemon

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

(No Meeting in December).

Meeting Location, Date and Time:

Coleman University, Hopper Hall

8888 Balboa Ave

San Diego, CA 92123

Monday, 20 July 2015, 7:00 P.M.

Program: News, Events, EV Simulation Talk

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Newsletter Topics:

Solar EV



Incentives Redefined



New Power Pricing



Message from the President

Hi All,

Tesla keeps making me laugh. A while ago, they had a firmware update that gave customers “insane” mode. Now, their next Model S will have “ludicrous” mode. For those of you who didn’t immediately pick up on it, “ludicrous” mode is a reference to a Mel Brooks movie called Spaceballs. It is a hilarious spoof on Star Wars (I highly recommend seeing it). It is these types of references and breaking the mold patterns with marketing, sales, and overall operation that keep Tesla in the news and relevant.

I really hope when the “affordable” Tesla hits the market, they will have enough cult following that a new generation of youngsters will plunk their money down like they do for an apple watch and we will see yet another swarm of electric cars push the volumes to something big auto will actually not complain about. I am tired of hearing how electric cars are not selling at the rate that was predicted. I think they should have fired the guy (or billion dollar firm) who predicted those numbers. I hope you all make it to this months meeting!

-Joseph



New Acceleration Option on Tesla Model S

What the Solar-Powered Stella Lux Means For the Future of Electric Cars

Collin Woodard, Cheatsheet.com, 16 July 2015

Since 1987, the World Solar Challenge has been a biennial race for solar-powered cars through 1,877 miles of the Australian Outback. It was originally dominated by incredibly aerodynamic, single-seat vehicles that were efficient, but never stood a chance of going into production. In the interest of promoting practicality, the organizers introduced the Cruiser class in 2013. Vehicles that competed in the Cruiser class were judged based on how many passengers they could carry, how practical the judges considered them to be, and how much electricity was needed to supplement the amount produced by the car's on-board solar panels.

The winner of the 2013 Cruiser class competition was Solar Team Eindhoven from the Netherlands' Eindhoven University of Technology. The winning car was called the Stella, and it could seat four passengers, had a range of 373 miles, and even offered a trunk.

For 2015, Solar Team Eindhoven is back with an improved version of the Stella called the Stella Lux. With 381 solar cells on its roof charging a 15 kWh battery pack, a full charge gives it a range of up to 621 miles. It also has a top speed of just over 77 miles per hour.



Stella Lux solar car and it's creators from Eindhoven

Compared to other solar-powered cars, the Stella Lux actually looks a lot like a conventional vehicle. Its design channels a bit of the Dymaxion, and its tires are much skinnier than anything currently on a production car, but it doesn't look like the worst way to travel across Australia. Compared to solar-powered cars outside of the Cruiser class, it actually looks downright comfortable.

The biggest claim coming from Solar Team Eindhoven, though, is that the Stella Lux is an energy-positive solar-powered car. How that claim is worded might have you believe the solar cells are efficient enough to produce more than enough energy to power the car, effectively giving it an unlimited range as long as the sun is out. Digging deeper, though, you see that the Stella Lux is only energy positive if you drive it a short distance every day.

If you think about it, all solar-powered cars are energy positive if they set the number of miles driven per day low enough. For someone who only drives 30 miles or so per day, the energy to power their car would be free, but Solar Team Eindhoven won't exactly be cruising through the Australian Outback on an endless supply of solar power.

While the achievements of the teams competing in the World Solar Challenge are impressive, you have to question how practical it is to put a solar array on a car in the first place. The idea of a car that can run on its own power forever is nice, but it's not exactly practical.



Instead of trying to fit solar arrays on top of cars, surely it would be more efficient to put much larger solar arrays on rooftops that could then, in turn, charge electric cars. In fact, electric car owners can already do exactly that. A Tesla Model S doesn't have a 600 mile range on a full charge like the Stella Lux, but it has a comfortable, luxurious interior, excellent acceleration, and an attractive design.

You also never have to worry about how much sun your Tesla is parked in, which direction it's facing, how hot the interior is going to get while it (hopefully) sits in the sun, or the damage that random road debris might do to the cells on your car. A rooftop solar array, on the other hand, can be set up to maximize sun exposure and then generally left alone. It will sit there producing electricity without you having to worry about anything.

The other advantage of rooftop solar power is that most power companies will pay you more for your electricity during the day than you'll pay to charge your electric car at night. Solar Team Eindhoven claims you can sell any additional electricity it produces back to the power company, which will offset what you have to pay to charge the Stella Lux when drive more than a short distance in a day, but that's really only mitigating the inefficiency that comes with mounting a solar array on the roof of a moving car.

Where solar panels on production cars probably have the most potential, though, is as a way to offset the drain of accessories like air conditioning. Fisker tried that approach with the Karma before it went bankrupt, as have a few other automakers. Its adoption hasn't exactly been widespread, but as more automakers search for ways to extend the ranges of their battery electric cars and improve the fuel efficiency of their hybrids, you may start to see solar panels on mainstream cars becoming more common.

Three States Curtail EV Incentives

July 10, 2015, Legislation & Policy, Ecomento.com

Everyone loves Tesla but not everyone loves helping people buy them, especially taxpayers. As of July 1, two states – Georgia, and Washington – have significantly curtailed their plug-in hybrid and EV incentives to reduce the amount of money that goes to wealthy buyers.

On June 30, the California Air Resources Board proposed to amend its Clean Vehicle Rebate Program to favor low income buyers over wealthy customers after new statistics showed 26% of Tesla buyers have household income greater than \$200,000.



Tesla Model S

Once those proposed changes take place in 4-6 months, consumers will not be eligible for CVRP rebates if their gross annual incomes are above the following thresholds: \$250,000 for single filers, \$340,000 for head-of-household filers and \$500,000 for joint filers.

According to the California Air Resources Board, the changes were made to direct the incentives “towards those most likely to value the rebate the most.” The Board has requested the amount budgeted for the rebate program in fiscal year 2016 be increased from \$121 million to \$162 million, but it will be up to the state legislature to approve the extra funds.

Until the changes are implemented, the existing rebates of \$1,500 for a plug-in car and \$2,500 for an electric car will remain in effect. Wealthy buyers will still be eligible for a \$5,000 rebate if they purchase a hydrogen fuel cell car.

Further north, the state of Washington has simply eliminated any incentives for cars costing more than \$35,000 as of July 1. Democrats in the state legislature made it clear at the start of the session they did not want to subsidize wealthy car owners any more. As a result, Teslas and the BMW i3 are no longer eligible for that state's incentive program.



Nice BMW i3 in front of nice house

For many years, Georgia had the highest incentive for plug-in hybrid and electric cars – \$5,000. But as of July 1, that program has ended and the state now has no incentives at all. To make matters worse, the state legislature has imposed a new \$200 a year additional registration fee for privately owned alternative fuel vehicles. Commercial vehicles must pay a \$300 per year fee.

Electric and plug-in hybrid cars are not a novelty any more. Incentive programs that seemed like a good idea a few years ago are costing states a lot of money as sales of alternative fuel vehicles increase. The federal \$7,500 tax credit is due to expire in less than 18 months. The new mood among taxpayers in California, Washington and Georgia may be a signal that whatever Congress comes up with to replace the \$7,500 tax credit may be quite a bit different from the current program.

California approves major electricity rate changes

Sammy Roth, The Desert Sun July 3, 2015

State officials voted unanimously to raise electricity rates for millions of Californians on Friday, over the objections of consumer advocates and environmental groups who called the plan a giveaway to the wealthy and said it would discourage people from saving energy and going solar.

The controversial changes were a long time coming. For years, Southern California Edison, Pacific Gas & Electric and San Diego Gas & Electric have wanted to raise rates for those who use the least and lower rates for those who use the most, and the California Public Utilities Commission made it happen in a 5-0 vote.

The plan approved Friday also leaves the door open for new fixed charges, another utility industry goal. Edison and other electricity providers have argued that current rates unfairly penalize high-usage customers, and that low-usage customers aren't paying their fair share. Utility companies have also said that all customers, including solar customers, need to pay more to keep the electric grid running — hence the need for higher fixed charges.



Consumer advocates agree that some changes are needed to make rates more fair. But they criticized the plan passed Friday as a sign that the public utilities commission isn't looking out for the best interests of the public.

"This is a lose-lose for customers, but business as usual for the CPUC, which has once again done PG&E, Edison and SDG&E's bidding," Mark Toney, executive director of The Utility Reform Network, a San Francisco-based ratepayer advocacy group, said in a statement.

Edison's residential customers currently pay for electricity in four tiers, with energy use in the fourth tier costing more than twice as much as in the first tier. That stark difference, consumer advocates say, motivates people to save energy, and gives high-usage customers a financial incentive to invest in energy efficiency and rooftop solar.

Under the changes approved Friday, the difference between what high-usage customers and low-usage customers pay will shrink. By 2019, the number of tiers will be reduced from four to two, with a price difference of just 25% between them.

Critics say those changes amount to a redistribution of wealth from low-income to high-income families, arguing that wealthier people tend to use the most energy. In explaining their votes at Friday's meeting, several commissioners said the link between income and electricity use isn't as well-established as critics believe. Many high-usage customers, they said, are simply large families living in small homes, or low-income desert residents who need constant air conditioning to stay cool during the summer.

There will also be a "surcharge" for the highest-usage customers, a last-minute addition by commission President Michael Picker to mollify Commissioner Mike Florio and other critics of his original, utility-backed proposal. Under that surcharge, the most excessive electricity use will be billed at more than twice the rate of low-end electricity use.

Critics, though, weren't convinced that the surcharge would make much difference, since it would only apply to electricity use more than 400% above baseline. The public utilities commission estimated that it would only apply to 10% of Edison customers, and only then to the top 4% of actual electricity use.

The plan passed Friday would also delay new fixed charges sought until at least 2020. But it lays the groundwork for utility companies to make a new case for those charges.

Additionally it switches all Edison, PG&E and SDG&E residential customers to "time-of-use" electricity rates starting in 2019. Under those rates, the cost of electricity will depend on the time of day — and time of year — that you use it.

Several commissioners repeatedly emphasized that the commission will have many more changes to encourage conservation and solar over the next few years, including an ongoing proceeding to revamp the solar incentive program known as "net energy metering."

Consumer advocates, though, weren't convinced that the commission would follow through on those promises. "It's hard not to look at the commission's track record and look at the repeated attempts to fast-track power plants in lieu of clean energy," said Evan Gillespie, western region deputy director of the Sierra Club's Beyond Coal Campaign..



FOR SALE: 1998 VW Golf EV Conversion

Range: 50-60 miles, driver dependent
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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) _____

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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/eamembership.html>

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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.

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