Volume 25, Issue 2 EVAOSD Newsletter February 2015

Charged Up

ELECTRIC VEHICLE ASSOCIATION OF SAN DIEGO (EVAOSD)
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Regular Meetings: Our monthly meeting location is in rotation. Please, check date and location below (No meeting in December)

Meeting Location, Date and Time:
Center for Sustainable Energy
9325 Sky Park Court, Suite 100
San Diego, CA 92123
Monday, 23 February 2015, 7:00 P.M.

Program: News, Info, and future events

Inside this issue:

Newsletter Topics:

400 Mile Roadster

EV Range and Climate

World EV Flight Planned

Message from the President

Hi All,

I about fell out of my chair when I heard Apple might be making an electric car. My first though was some white egg looking thing that is perfect for the new “hipster”. Then I started to think if they really could apply their elegance in product design into a car, would it be good. Next comes the rumor that since Apple has about a hundred billion in cash, it only makes sense that if it wants to get into the electric car business, it should buy Tesla! My mind exploded. Is there anyway the evil genius of Elon Musk could pair with the over the top apple? This is going to be an epic story to unfold this year. Especially with Tesla making good progress on the Model X and it’s other cars. Let’s see if we can help keep all these players playing. Oh, and I let’s keep our eyes on Tesla’s home stationary power system. That should be interesting.

-Joseph

Tesla Roadster 3.0 Update: San Jose To LA Without Recharging

By Stephen Edelstein, Green Car Reports
Feb 17, 2015

Back in December, we first received confirmation of the "3.0" update for the Tesla Roadster, the electric-car maker's very first product, sold in the U.S. from 2008 through 2011.

Tesla claimed the update would boost the Roadster's range 40 to 50 percent, and said a real-world demonstration was forthcoming.

Now, that's been taken care of.

A prototype Roadster 3.0 recently made the trip from San Jose, California, to the Santa Monica Pier in Los Angeles without stopping to recharge.

That's a distance of approximately 340 miles, completed without any hiccups, according to a company blog post.

While Tesla's original announcement of the Roadster 3.0 boasted that it could be driven over 400 miles per charge in certain conditions, this real-world test still showed a nearly 100-mile boost in range compared to the current car's 244 miles.

Tesla also claims 20 miles worth of charge remained after completing the six-hour drive.

The test trip started at the first Tesla Store in San Jose, and followed the I-5 to Santa Monica Pier, via a second Tesla Store on the 3rd Street Promenade.

Cruise control was used on the highway sections of the route--set "to stay right around the speed limit"--and the heater was turned on for approximately 40 minutes, according to Tesla.

The Roadster 3.0 upgrade consists of three major components.

The first is a boost in battery-pack capacity from 53 kilowatt-hours to around 70-kWh, which will be accomplished using new battery cells with higher energy density.

The second element is an aero kit that Tesla says will lower the coefficient of drag by about 15 percent from the current 0.31.

Finally, the updated Roadster will be equipped with lower rolling resistance tires. Tesla previously said the coefficient of rolling resistance will be reduced from 11.0 kilograms per ton to 8.9 kg/ton.

Tesla won't yet discuss pricing, availability, or the timing of the Roadster 3.0's launch.

The company said it will apply lessons learned from the trip to continue development, meaning it could still be a while before customers can reinvigorate their Roadsters.

The Best—and Worst—Places to Drive your Electric Car

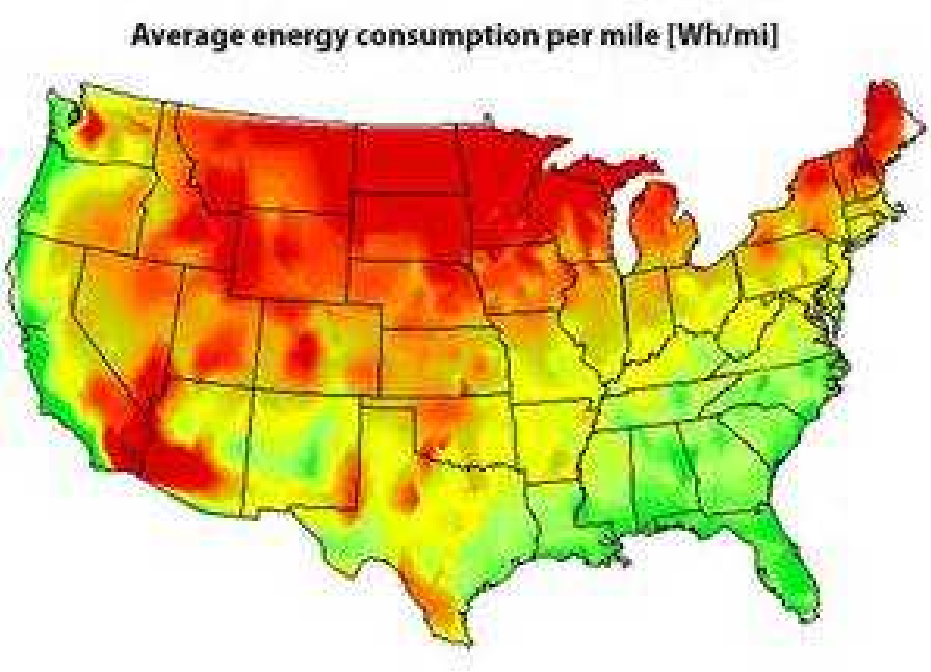
By Nsikan Akpan, 20 February 2015, http://news.sciencemag.org/

For those tired of winter, you're not alone. Electric cars hate the cold, too. Researchers have conducted the first investigation into how electric vehicles fare in different U.S. climates. The verdict: Electric car buyers in the chilly Midwest and sizzling Southwest get less bang for their buck, where poor energy efficiency and coal power plants unite to turn electric vehicles into bigger polluters.

Scientists at Carnegie Mellon University (CMU) in Pittsburgh, Pennsylvania, began their research by pulling public data from FleetCarma, a company that tracks vehicle performance among car fleets operated by governments and businesses. The study looked at 7000 all-electric Nissan Leafs across the country and how their driving ranges varied with temperature. Cold reduces a battery's oomph whether it lives in your car or smart phone. "We then combined those performances with regional reports on weather and drivers' habits to build a nationwide map of car efficiency for every hour of every day within a typical year," says co-author and CMU mechanical engineer Jeremy Michalek.

In terms of driving range, electric cars in California and the Deep South travel the farthest, as the balmy temperatures yield the best energy efficiency and therefore longer trips before they must be plugged in again. (That's a lucky break for Golden Staters, who also purchase the most green vehicles in the nation.) Vehicles in cold places, in contrast, have less battery capacity and thus shorter range. The average range of a Nissan Leaf on the coldest day drops from 112 km in San Francisco to less than 72 km in Minneapolis, according to the study, published online this month in Environmental Science & Technology.

The reason is straightforward. When batteries are cold, they have a lower electrical capacity, which limits the duration in which they can pump power. But extremely hot cities, like Phoenix, were almost as bad as chilly towns. Heat improves battery efficiency, but too much can degrade its overall life span and output.



Average energy consumption per mile for an EV fleet over full year. Greenest rates (170 Wh/km), Worst in terms of energy efficiency (196 Wh/km; red).

These temperature extremes require drivers to charge their cars for longer. So the team measured the greenhouse gas emissions that would be generated by power grids as a result of plugging in electric vehicles at home. Average energy consumption by electric cars was 15% higher in the upper Midwest and Southwest versus the Pacific Coast.

“We knew that vehicle range was influenced by AC and heater use in extreme climes, but I was surprised by the size of the cold weather effect on battery efficiency,” says David Greene, an energy and environmental policy expert at the University of Tennessee, Knoxville, who was not involved with the study.

But future electric car owners shouldn’t be discouraged by these environmental shortcomings, Greene says. Electric vehicles are still in their infancy, and the findings offer policymakers new insights into how best to introduce electric cars across the country. For example, he says, America’s power plants are “the biggest source of greenhouse gas emissions” in the country. Cleaning up the grid would be the cheapest way to cut greenhouse gases, Greene says (along with the U.S. Environmental Protection Agency), and lower the climate impact of electric vehicles. In the meantime, policymakers could push incentives, like access to high-occupancy vehicle lanes or tax breaks for charging stations, in regions where electric cars already perform well (such as the Southeast and Pacific Coast) and spend less effort outside those regions. Such incentives could boost electric car sales overall. “More money equals a greater investment into technology, like improved batteries and power stations, which reduces barriers for all consumers,” Greene says.

Around-the-World Solar Flight Plan Announced

Solar Impulse 2 will set off in late February or early March for an around-the-world flight powered only by sunlight.

Published: 27-Jan-2015, EV World

The second generation of the solar-powered Solar Impulse electric airplane (Si2) will set off from the Persian Gulf emirate of Abu Dhabi either in late February or early March for a record-setting around-the-world flight on photons alone.

Previously, the first generation of the giant, four-motor, single-place aircraft (Si1), flew from its homebase in Switzerland to Paris, later to Morocco, and then last summer crossed the United States from San Francisco to New York City. Piloted alternatively by co-founders Bertrand Piccard and André Borschberg, the globe-girdling flight will cover an estimated 40,000 km and take upwards of five months with extended layovers along the eastward flight route.

The team, which is now in Abu Dhabi after the Si2 was disassembled and loaded aboard a 747 transport aircraft for the flight from Switzerland to the Gulf, announced their proposed flight route. From Abu Dhabi, the plane will fly first to Muscat, the capital of Oman, skirting sensitive Iranian airspace. The next leg will include its first extended flight over over, cross the Indian Ocean to Ahmedabad, India. From there the plane, which will be flying above 18,000 ft (5,400 m) as it lumbers along at a leisurely airspeed of 45-60 mph, and hopefully a bit faster with the help a westerly tailwinds, will make for Varanasi India. Next stop will be Mandalay in Myanmar, followed by Chongqing and Nanjing, China. Most of these legs will be over land, including the rugged Hengduan Mountains along the Myanmar-China border.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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) _____

☐ ($10 each) Additional Chapters or Special interest group (other than the one that comes with the membership)

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

☐ New Member ☐ Renewal

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☐ 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

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