

# Charged Up



## ELECTRIC VEHICLE ASSOCIATION OF SAN DIEGO (EVAOSD)

An affiliate of the Electric Auto Association (EAA)

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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 4<sup>th</sup> 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, 25 May 2016, 7:00 P.M.

Program: News, Project Status, Events

### Newsletter Topics:

#### SDG&E Charging Plan



#### Electrified Ferrari



#### New EV Super Bike



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## Message from the President

Hi All,

We have a new issue in the EV world. A lot of people are retiring their conversions and moving into production EVs. The upside is that they are supporting the production electric vehicle revolution. The downside is they have a conversion they can't seem to sell. There are a lot of great deals out there for pennies on the dollar of what went into the conversion, however, they have the limitations of older technology (lead acid batteries), heavy weight, and sometimes slower speeds.

We need to make sure these vehicles don't just go to the recycling yard. They are perfectly usable for popping around town. So if you know anyone that wants to get an EV or maybe a spare car/truck to zip around the neighborhood for very little money, check out the deals out there and get one moving. The parts alone are worth twice what some are asking. Those parts can be used in making one heck of a zippy go-cart or motorcycle as well. Hope to see you at the next meeting!

-Joseph



**Classic Clean EV Conversion**

## **SDG&E's electric car push**

### **\$52.5 million for 3,500 charging stations**

By Rob Nikolewski, San Diego Union Tribune, May 16, 2016

San Diego Gas & Electric has launched a \$52.5 million pilot program that within three years will install 3,500 charging stations at 350 locations and promises to include every community that SDG&E serves.

The "Power Your Drive" project is aimed at boosting electric vehicle ownership and comes with a \$45 million price tag to install the stations that SDG&E will own and maintain. There's also a \$7.5 million education program that will include electric vehicle, or EV, test drives for the utility's customers, with an emphasis to include ratepayers in low-income areas. "We want to make sure installations are available to everyone, not just the wealthy," SDG&E CEO Jeff Martin said at a Monday morning news conference.

The move comes in large part because of clean air initiatives mandated by Gov. Jerry Brown and the California Legislature. Brown has called for 1.5 million EVs on the road by 2025, and Senate Bill 350 calls for 50 percent of the state's energy to come from renewable sources by 2030.



The SDG&E pilot program was OK'd by the California Public Utilities Commission in January. The program aims to place charging stations in businesses, multifamily residences such as apartments and condominiums, as well as low-income areas where EV drivers are hard to find.

"Now that the cost has come down (for EVs) and now that we're seeing many of these vehicles going into the secondary market as used cars, we need to think about that for our community," said Herman Collins, a member of the Bayview Baptist Church in the Encanto area in southeast San Diego. Collins said his church, located on a 60,000 square-foot site, is looking to have two to five charging stations installed.

Customers who use the charging stations will be billed by the company for each charge. SDG&E officials say that customers will be able to use a smartphone app to make sure their electric cars get charged when energy prices are at their lowest rate.

"We've got so much solar (energy) in the middle of the day, sometimes there's an overproduction of solar, so we'll put it in the cars," said Hanan Eisenman, SDG&E spokesman. "We'll also encourage them to charge in the evening, off-peak, so it doesn't affect peak usage times."

The combination of the utility owning the charging stations and offering a real-time energy pricing mechanism during off-peak hours is the first program of its kind in the nation, Eisenman said.



Chula Vista is working with SDG&E to install 60 charging stations at its city facilities and other locations. "That's really going to encourage residents to let them know they have a place to charge electric vehicles," said Chula Vista mayor Mary Casillas Salas, who attended the Paris Climate Summit last December.

San Diego Council member Mark Kersey, an EV driver, said dramatically increasing the number of charging stations will reduce what's called "range anxiety" — the concern that the vehicle will conk out before the driver gets home. "Infrastructure is everything," Kersey said at Monday's news conference.

But Adrian Moore, economist and vice president of policy at the Los Angeles-based Reason Foundation, which calls for free-market solutions to energy issues, criticized the SDG&E program. "It's clearly outside their basic mission, which is to provide affordable access to electricity," Moore said, adding that electricity in California relies heavily on natural gas, a fossil fuel. "They could use that money to help keep (electricity) costs down for the poor."

Martin said SDG&E is not only responding to state mandates but meeting giving ratepayers what they are calling for. "Customers want real time information, they want cleaner sources of energy, they want access to technology and innovation and this program is right in the wheelhouse to providing what our customers want," Martin told the Union-Tribune.

Who pays for the project? Martin said the \$45 million pilot program will be paid by SDG&E customers while the \$7.5 million education program comes from the company's shareholders. He said SDG&E won't make more money through the "Power Your Drive" project.

"If we stop selling electricity today we make the same amount of money if we sold a lot more electricity," Martin said. "We're really in the infrastructure business."

## This electric Ferrari 308 GTS would do Magnum PI proud

- All it took were a few years and lots of hard work.

Noah Joseph, Autoblog.com, 4 May 2016

We've seen Lancias, Alfas, Maseratis, and assorted F1 cars over the years packing Ferrari engine. But seeing a Ferrari running under different power is something else entirely – let alone one packing a fully electric powertrain. Yet that's what one company in Southern California has done with this 1978 Ferrari 308 GTS, swapping out its V8 engine for an array of electric motors and battery packs.

Rather than tearing apart a perfectly good Italian sports car, Eric Hutchison of San Diego-based Electric GT found the Magnum PI-spec Prancing Horse for salvage after it had burned out from an unfortunate fuel leak. One man's loss being another's gain, he bought it for \$10,000 and, together with his friend Michael Bream at EV West, set about converting it to electric power.



With three AC51 HPEVS electric motors and 48 batteries installed, the Cavallo Elettrico produces an impressive 465 horsepower and 330 pound-feet of torque. That's a heck of a lot more than the 2.9-liter V8 in the original 308 ever produced: before later versions introduced fuel injection and four-valve cylinder heads, the 308 packed about 200 horsepower and 181 lb-ft. Not one of the most powerful models ever to leave the factory in Maranello, in other words.

To handle the extra muscle, Hutchison, Bream, and company fitted a new clutch, flywheel, pressure plate, and (perhaps the oddest part) a Porsche transaxle, mounted upside down. Though most EVs do away with a conventional transmission, Hutchison points to the original (though ultimately unfulfilled) Tesla Roadster plans and the Formula E setup as evidence of the combo's ideal blend of efficiency and performance. "The massive torque transferring through the transmission engages the driver in a clutch-dropping, gear-pounding Ferrari experience," he said.



To offset the added weight of the four dozen 3.3-volt lithium-ion batteries, they stripped out anything they could, and found new homes for many of the jettisoned components through fora like Ferrari Chat, whose members enthusiastically followed the conversion process. The result is a vehicle just 150 pounds heavier than stock that can travel 100 miles on a single charge. That's more than most OEM EVs can go these days, and (arguably) in better style, too. We've been following the project's development for nearly two years now, and took it for a spin on Translogic. But now that it's complete, the hybrid powertrains in Ferrari's own F1 racers and LaFerrari supercar suddenly seem decidedly old-school, despite their newer forms.



Three Controllers and Three AC51 Motors

## Victory Unveils 2016 Isle of Man TT Electric Bike

By Chris Cope, RideApart.com - May 18, 2016

Victory Motorcycles has pulled the cover off the electric motorcycle with which it will compete in this year's Isle of Man TT Zero race.

This year's bike, known as the Victory RR, looks considerably less like the rebranded Brammo that managed a podium spot last year. Veteran Isle of Man racer William Dunlop will pilot the bike this year, as was originally the plan in 2015.

Last year, Dunlop was injured shortly before the Zero race and motorcycling legend Guy Martin was drafted in to race one of the two bikes Victory ran that year, the other being ridden by Lee Johnston.

According to Victory Racing team manager Brian Wismann, the bike Dunlop will be riding this year is different not just in aesthetics. The bike will be powered by a new battery set up and an improved motor.



**Victory RR Isle of Man TT bike**

"The newly developed battery leverages the lessons learned from our entry in last year's TT Zero event," he said. "The battery is a ground-up new design with the help of our technical partners at Brammo and necessitated a big change in the chassis design. The biggest difference in the battery itself is an improvement in both the overall energy/capacity we're carrying on board the bike, as well as a marked improvement in the energy density of the battery itself."

Meanwhile, the motor has been tweaked to deliver 170 hp and an arm-ripping 177 ft-lb of torque, with peak efficiency topping 97 percent.

"This year's [motor] features an even further optimised winding configuration based on the data gathered from last year's bikes, coupled with the increased energy on board in the battery," Wismann said.

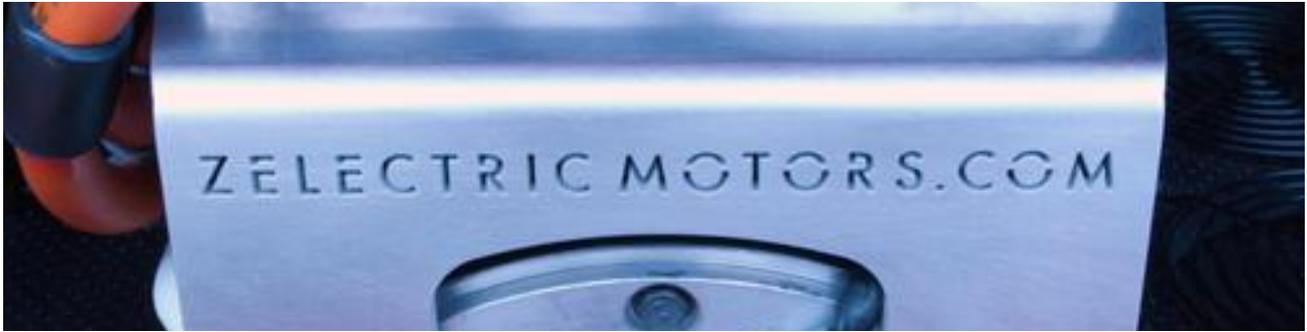
Victory Director of Marketing Alex Hultgren says that competing in events like the Isle of Man TT Zero is a way for Victory to improve the quality of the vehicles it manufactures. He said events like this and the Pikes Peak International Hill Climb (in which Victory will also be competing) serve as a test bed for technology that will be used in future products.

"One way we continuously push ourselves in performance is through our Victory Racing initiatives," he said. "The Isle of Man TT is one of the most challenging motorcycle races in the world, so of course we have to be there.

The first practice for the TT Zero is scheduled for Friday, June 3rd, with second practice on Monday, June 6th, with the race itself taking place on Wednesday, June 8th.



Obviously electric MOTOCZYSZ, previously raced at the Isle of Man Motorcycle Race



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\$3,900 or OBO



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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

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/eamembership.html>

New Member  Renewal

Name  email

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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