



# EEVC NEWSLETTER

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## SUMMER GET-TOGETHER A SUCCESS

On July 18 members of the EEVC held an informal get-together at the Five Points Diner in Sewell, NJ. The event, organized by Dan Monroe, attracted a pretty good turnout. Here's Dan's report on the event, with pictures by new member James Natale:



Ken Barbour by Alan Arrison's electric pickup.



Ken Barbour's Geo, with Gasless license plate.

I think it went very well. Or at least well enough that people wanted to do it again next month.

There were ten of us there. Bill Crozier brought his converted Civic up again so we had three EVs and two Prii (Ann would like to add that according to Toyota the plural of Prius is ... Prius) to show off. Not many people stopped by but Ken went out to talk with a family who were checking out the cars when we went in to eat. They, the son especially,



(l): Ed Kreibick and his wife. (r): Dan Monroe.



Two Priuses on display.

enjoyed seeing the cars and were considering starting a conversion project of their own. Ken gave them all the web site details. He also put me in touch with a few people who called him about EVs. They were interested in coming over to the next gathering.

The topics ranged all over the spectrum, including but not limited to: The Power of AC, battery cycle life, EV liquid heaters, production EVs, changing the batteries in the green Rabbit for drag racing, Biodiesel, the fate of the Mini E, member dues, & DIY solar panel installation.

Everyone thought the Five Points Diner worked out as a great location to get together. Hopefully next month it will be a bit cooler though. We ended up all parking on the side

of the lot to get some shade. While there we found out that there are electrical plugs under every tree on the property so they can plug in Christmas lights. Maybe next time we can get them to turn them on so we can charge a bit.

I'm thinking August 15th will be when we have the next get-together. In the mean time I was thinking about finances. At dinner everyone talked a bit about raising the membership dues. It's probably a bit overdue but no one wants to put an extra pinch on the fixed income members. One thing someone mentioned was a long term member price break. With everyone that has been with the club for ten+ years getting the \$20 membership price and all new comers paying the new price.

Whenever we get together for an event we try to wear some sort of EV-related shirt. I was thinking what we really need is an official EEVC t-shirt that we can wear to give ourselves more of a club identity. Most t-shirt places can make up a batch for \$3-\$4 each (a bit more if you want to get really detailed) and we can turn them around for \$15 to \$20 to help fill our coffers a bit. They might also be offered to the public at some of the different events where we show our cars or give talks.

Another thing Ann and I were tossing around is a multi-member mega yard sale. With the proceeds either split with the donating members or kept for the club. We might even ask businesses to donate goods. Although that would only really work if we got 501c3 status.

## **PRESIDENT'S MESSAGE**

**Oliver Perry**

Recently one of EEVC members asked me whether I thought *The Wall Street Journal* was conservative or liberal in its political views, especially when it comes to expressed opinions regarding the future of electric cars. The point also raised the question as to whether or not the primary readers of *The Wall Street Journal* purchase that particular paper primarily for financial investing and expect most articles to help guide them in making financial investments.

These are good questions. Although I have my opinions, I am not quite sure. When it comes to being for or against electric vehicles I personally do not feel the *WSJ* writers as a

group, or the controlling interests in the *WSJ*, are against the development of electric cars. I feel that a paper like the *WSJ*, in order to keep an authentic voice in the marketplace, has to print factual information and reserve judgement for its readers.

As history has shown many, if not most, of the financial advisors in our world have proven to have feet of clay when it comes to knowing exactly what the future holds for anything other than taxes and death. What the *WSJ* provides, besides a forum for a select group of opinionated business and corporate minded writers, assuming the information is factual, is to enable their readers to better make investments. The paper provides up-to-date insight into the dynamics of financial world issues. It helps us to better understand the global economic picture as generated by governmental policies and politics. Articles inform us where the money is or is not. It helps us to better understand where the massive investments of the world are located. These facts and figures do help to give us a better picture of what is going on in our economy and what the possible future holds. As the old saying goes, if you want to better understand what is going on in society, follow the money trail.

If someone informs us that, according to the weather report it is going to rain on our party it does not mean that that person is against us having a party. Knowing the forecast may remind us to bring our umbrellas. Cursing the weatherman or blaming him for his prediction is sort of shortsighted. A rain prediction might discourage our friends from attending our affair. We might prefer a sunny prediction to insure a bigger crowd, especially if the forecast is uncertain. But I prefer being given the facts as they are, hearing all of the possibilities, and making my own decision, based upon my interpretation. What is important is that our electric car forecasting be based upon truthful statistics and facts, not just on hopes and dreams. Our enthusiasm for electric vehicles should not encourage poor financial decisions or encourage unwise investments.

The following article should be of interest to all of us.

*Wall Street Journal* July 19, 2010 page C1 (section on Money and Investing)

Bolivian magnate R. Marcelo Claure had been looking for a way to make a broad based bet on lithium. A hedge fund in which he invests found him one. The fund, Mc Capital Advisors, this year turned to a company that creates exchange traded funds, ETFs. (ETFs typically are tradable securities designed to track an index of stocks, bonds, or commodities.) The result was Global X Lithium, an ETF that tracks lithium producers and battery makers.

Mr. John Hyland is chief investment officer of US Commodity Funds, which runs eight energy companies, including the U.S. Oil Fund and the U.S. Natural Gas Fund. His company is about to launch an ETF designed to track commodities whose current contract is trading at a premium to future contracts, generally a sign of tight supplies, along with long-term trends.

“What everybody wants to achieve is to build the best and most representative index for lithium,” said Bruno del Ama, chief executive of Global X Management.

Side note: An index, defined from a booklet *Wall Street Made Simple*, at one time was the average of the closing prices of a selected group of major stocks traded that particular day. Today the index has been modified to represent a continuation of an average that measures market action of selected major stocks. Its value is in points, not dollars. The index can be used to indicate market trends. My concept of the index is that it serves like the posted average of the value of selected frequently traded baseball cards. The actual value of a particular card may vary from the average, but knowing the average and following that average over time gives one an indication of possible future values of cards and can be a guide as to what one might have to pay to purchase a card of their favorite old-time hero. No one knows for sure how many of your hero’s cards are available and what the future value of that particular card will be, but the index gives an indication of the demand for baseball cards in general. In the case of lithium, tracking the stock of twenty or more lithium companies and posting the average value of their stocks might provide an indication of supply and demand for the metal in the future. )

“Mr. Claure, the Bolivian magnate, said in

an email that he had spent years looking for an easy way to invest in lithium. His Bolivian roots got him interested in lithium because Bolivia has one of the largest of the world’s lithium deposits. This highly reactive metal is not traded on any commodity exchange. Companies producing lithium are either multinationals where lithium accounts for only a small portion of their business or nascent miners where production is still years away.

“While lithium is commonly used in batteries for cell phones and computers its brightest future appears to be in the movement toward electric cars. Tesla Motors Inc.’s Roadster runs on thousands of small lithium-ion battery cells.

“Lithium prices have tripled since 1999, according to Credit Suisse. Global demand for lithium is expected to more than double by the end of this decade, according to TRU Group Inc., a Toronto independent consultant specializing in lithium.

“Some analysts warn against over hype in the lithium market. About 50 companies were set up over the past two years to develop lithium but more than 80% of them will never come into production due to technology changes and costs, said Edward Anderson, president of the TRU Group. Lithium is in abundant supply, he said.

“Still, Mr. Claure said he sees lithium as a the commodity of the future and will expand his investments in the industry over the next few years.”

### UPDATES TO WEB PAGE

The 21st CAC videos are now available at the club’s Web site, at [www.eevc.info/2010cac.html](http://www.eevc.info/2010cac.html). Webmaster Lindy Groening has also added a member links section to the links page: [www.eevc.info/links.html](http://www.eevc.info/links.html)

### THIS EV IS FASTER THAN YOURS



Jerry Asher writes to remind everyone about The White Zombie, John “Plasma Boy” Wayland’s converted 1972 Datsun 1200 coupe that he claims is the world’s fastest accelerating street legal electric car — and he’s probably right. Using lead-acid batteries (helicopter starting batteries, not golf car batteries) the car goes from 0 to 60 in about 3.5 seconds; it does the quarter mile in 11.882 seconds at 109.58 mph. With lithium batteries it does better: 0 to 60 in 1.8 seconds, 10.400 seconds in the quarter mile at 117.71 mph.

John runs at Portland Raceway in Oregon, and has a Web page devoted to the White Zombie and his other activities; it’s at [www.plasmaboyracing.com](http://www.plasmaboyracing.com). A video is available on Autoblog Green, at <http://green.autoblog.com/2010/08/04/video-white-zombie-sets-quarter-mile-record-with-new-lithium-pa/>

### What makes it go

Over the 14 years he’s been developing the car Wayland has filled it with some impressive stuff. There’s a “Siamese 9” dual-armature motor, created by combining two 9-inch motors. Electricity comes from 192 Dow/Kokam lithium polymer cells contained in twelve 29.6V clear Lexan modules. Battery pack is 355V, capable of 2400 amps discharge, and stores 22.7 kWh of energy. Control is via a 2000 amp Zilla.

### TESLA HAS A LONG ROAD AHEAD By California Pete



The news in the Bay Area has been full of Tesla Motors, which just did an IPO, but it’s still a ways from making a profit. Now that it’s a public company it has to report its earnings, and just announced a loss of \$38.5 million or \$5.04 per share, up from \$10.9 million and \$1.56 a year earlier. Revenue rose 5.4 percent to \$28.4 million.

Stakeholders Toyota and Daimler don’t seem too concerned; Toyota has announced that it will once again be selling electric RAV-4 crossover vehicles, this time with Tesla technology, with plans to begin selling in the U.S. in 2012. Tesla will send Toyota a fleet of test vehicles some time this year.

### Blowing hot and cold

Fire season is here, and we’ve already had some nice fires, including one near Palmdale in Kern County north of Los Angeles that burned 22 square miles and threatened up to 2300 structures at its height. The fire jumped an aqueduct and had to be vigorously fought when it menaced high-tension lines that feed L.A. There was also a five-acre fire in Griffith Park in Los Angeles and a 40-acre blaze that threatened 40 homes in Santa Clarita. And it’s just the beginning of the season. Not as bad as Moscow, but who knows?

Oddly enough, Northern California has been experiencing unaccustomed cool weather — some say the coldest in 40 years — with persistent fog. Kind of reminds one of the quote attributed to Mark Twain that the coldest winter he ever spent was a summer in San Francisco.

### Gay Marriage excitement

The California topic that has probably gained the most publicity was the overturning by a federal district judge of proposition 8, a 2008 referendum that amended the state constitution to forbid same-sex marriage. Judge Vaughn Walker stayed his own decision pending an appeal to the Ninth Circuit Court of Appeals (it was pretty well accepted that however Judge Walker ruled the losing side would appeal). There have been some suggestions that the U.S. Supreme Court would rather not touch this issue, but we’ll have to see what happens. In the mean time the political pundits and the advocates for both sides have been very busy discussing the issue.

### This month’s Left Coast silliness

Lest you think that Prop 8 and wildfires are all that happens out here on the edge, consider the case of rural Bell, CA, a 2-square-mile town of about 38,000 southeast of L.A.: Despite a quarter of the town’s population living below the poverty line, City Manager Robert Rizzo was taking in about \$800,000 a year, and the town’s part-time council members were each getting close to \$100,000 a year. Real estate taxes are higher than they are in Malibu

Multiple investigations are under way, and Rizzo and his gang have been forced from office. Long-time Philadelphians will be

amused by the name of the top guy.

Things are bad all over: Oakland just laid off a bunch of police and has announced that victims of non-violent crimes mail in a report, but can't expect a cop to come. The state budget is now 42 days late with no sign it will ever be completed. But the legislature is not ignoring the really important stuff. To wit: a bill has been introduced that would ban the distribution of single-use plastic grocery bags, and a state senator has proposed a bill to demote the state rock, serpentine, because it may contain asbestos. Way to keep your priorities straight, folks!

## NEWS UPDATE

### A few more notes on lithium

Investments in the nascent lithium industry are obviously exceedingly speculative.

One source of uncertainty comes from the fact that fully half the world's lithium is found in the vast Uyuni salt flats in southwestern Bolivia at an altitude of almost 12,000 feet. Bolivian president Evo Morales, a fan and friend of Venezuelan president Hugo Chavez, declared the government would control the minerals found there, but seems to be running into conflict with the people of the region. Hoping to find foreign partners, (Bolivia seems to lack the industrial capacity to develop the deposits), he has negotiated with Mitsubishi and Sumitomo, and "has travelled widely looking for possible joint investment in lithium production with Chinese, Russian and Iranian firms," according to an August 8 article by Raquel Gutierrez in *The Guardian* entitled "Lithium: the gift of Pachamama." Clearly, Morales is no friend of the U.S.

But the Uyuni is not the only potential source; Chile (currently the world leader in lithium), Argentina, Afghanistan and the United States all have substantial deposits.

The largest U.S. deposit seems to be in California's Salton Sea, and a number of companies are working to try to exploit that. We'll see what happens.

### EV startups in two states

Two companies have recently announced plans to build electric vehicles in the U.S.

The first is a joint venture between AMS Inc., a new division of Eagle Manufacturing, and Envision Motor Company, of Ames, IA. They said they'll assemble a new line of all-electric cars in Webster City, IA under the Electric Motor Cars brand and logo. Company officials said the deal will initially create 50 jobs, with up to 300 expected by the second quarter of next year.

Eagle Manufacturing, which specializes in metal stamping, manufacturing and assembly, has been a subcontractor for Electrolux. AMS will be the assembler of the new cars.

In Vivian, LA Epic Wake Boats has announced it will use the facility and workforce of the essentially-defunct Caddo Manufacturing plant to produce its electric and hybrid boats. *The Times of Shreveport* reports that the company's plans also include producing two electric cars, which are built more for recreation than everyday commuting.

### Two German companies like EVs more

Volkswagen and Porsche, which up til now seemed to reluctant to embrace electric vehicles, seem to be getting on board. According to a July 20 *Greentech Media* story Volkswagen, which in the past had not seemed all that enthusiastic about EVs, has decided to go electric more seriously. The story says that "Dr. Martin Winterkorn — the CEO of the conglomerate that makes Volkswagens, Audis, Lamborghinis and Skodas, among other cars — came to Palo Alto this week and told many publications that Volkswagen will play a key role in electrified driving." Yet despite showing some concept cars — including an Audi scheduled for 2012, the Volkswagen E-Up, scheduled for for 2013 and hinting at an electric Golf for 2013 — Winterkorn went on to say "that hybrids and electrics might constitute 3 percent of sales by 2018."

Porsche (now part of VW), according to a July 26 *Greentech Media* story, has announced that it will come out with electric sports cars at an unspecified future date. Not a ringing endorsement, but who knows. Maybe if the Tesla starts to eat into Porsche sales...

### Pocono goes solar

On August 1 CNN online reported that

Pocono Raceway has installed a 25-acre solar farm that, when fully operational, is expected to produce 3 to 4 million kWh per year, which should take care of all the track's needs and leave some left over to sell back to the local utility

Pocono Raceway is no stranger to EVs; long-time EEVC members will recall several years that we brought an assortment of electrics to display and run around the track. Your editor remembers driving the Boyertown Museum's 1915 electric bus around the 2 1/2-mile banked oval and being lapped every 110 seconds by a silver-gray GM EV-1 going flat out.

### High-flying EV



Some EVs can fly. A news story around mid-July was the Zephyr solar-powered electric airplane: On July 17 CNN reported that the unmanned plane, developed by UK defense company QinetiQ, took off from Yuma Proving Ground in Arizona on July 9 and was still in the air seven days later. The plane is equipped with lithium-sulfur batteries that allow it to fly at night.

A check of the QinetiQ Web site revealed that the plane was finally brought back to earth after 14 days and 21 minutes.

The plane has a wingspan of 22.5 meters (74 feet) and a wing area of around 30 square meters (323 square feet) covered with thin amorphous solar cells. The entire thing weighs just 53 kg (117 lb).

### COMING EVENTS

**2010 American Renewable Energy Day**  
Aug 19-22, Aspen, CO. For information go to [www.areday.net/](http://www.areday.net/)

**2010 IEEE Vehicle Power and Propulsion Conference (VPPC)**

Sep. 1-3, Lille, France. For info go to <http://vppc2010.univ-lille1.fr>

**SAE 2010 International Vehicle Battery Summit**

1-3 Sep 1-3, Shanghai. For information go to [www.sae.org/events/battery](http://www.sae.org/events/battery)

**63rd International Motor Show 2010**

Sept.23-30, Hanover, Germany. Go to [www.iaa.de/index.php?id=besucher&L=1](http://www.iaa.de/index.php?id=besucher&L=1)

**Altwheels Fleet Day**

Sept 27, Framingham, MA. For information go to [www.altwheels.org](http://www.altwheels.org).

**SAE Convergence 2010**

Oct 19-20, Detroit, MI. For info go to [www.sae.org/convergence](http://www.sae.org/convergence)

**eCarTec München**

Oct 19 - 21, Munich, Germany. Go to [www.ecartec.eu/](http://www.ecartec.eu/)

**Southern Electric Vehicle Expo**

Oct 29-31, Asheville, NC. Go to [http://sevexpo.com/e107\\_plugins/calendar\\_menu/event.php?1288378800.event.1](http://sevexpo.com/e107_plugins/calendar_menu/event.php?1288378800.event.1)

**EVS25**

Nov 5-9, Shenzhen, China. Go to [www.evs25.org/event/2009ddc-en/index.html](http://www.evs25.org/event/2009ddc-en/index.html)

**Green Truck Summit**

March 7-10, 2011, Indianapolis, IN. Contact Susan Romeo, [sromeo@calstart.org](mailto:sromeo@calstart.org), 626-744-5600

**Solar 2011**

May 16-21, Raleigh, NC. For info go to [http://www.ases.org/index.php?option=com\\_content&view=article&id=18&Itemid=147](http://www.ases.org/index.php?option=com_content&view=article&id=18&Itemid=147)

**11th Challenge Bibendum**

May 18-22, 2011, Berlin, Germany. Go to [www.challengebibendum/en](http://www.challengebibendum/en)

### MEETING SCHEDULE

Meetings are held in Room 49, Plymouth-Whitmarsh High School, 201 East Germantown Pike in Plymouth Meeting, PA, and begin at 7:00 p.m. Note that here are no July or August meetings.

Sept 8

Oct 13

Nov 10

Dec 8