

EEVC NEWSLETTER

Published by the Eastern Electric Vehicle Club

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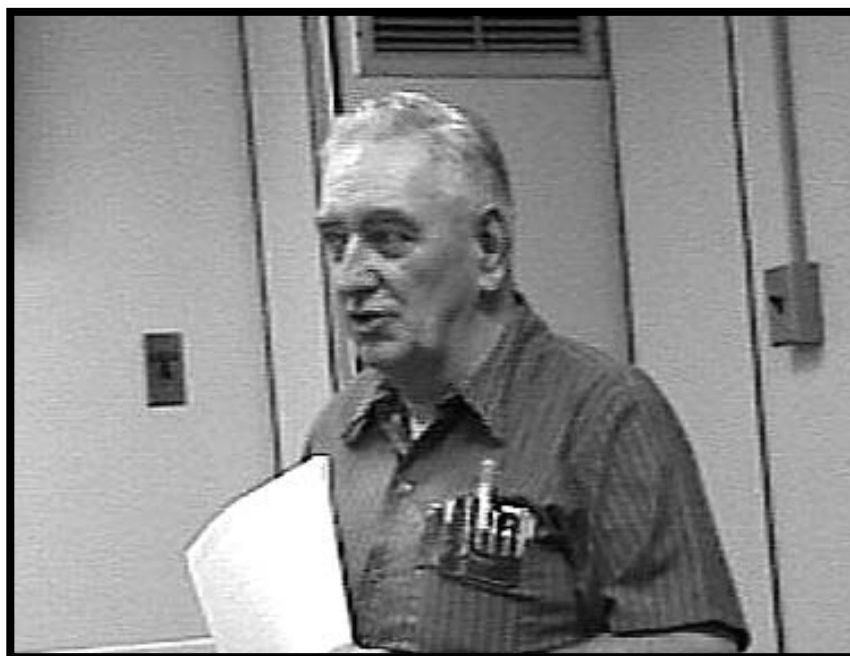
EEVC FOUNDER GUY DAVIS DIES AT 72

Guy L. Davis Sr., a founder, driving force and inspiration for the Eastern Electric Vehicle Club, died Friday, May 18, 2007 in Montgomery Hospital in Norristown. He was 72.

He was one of the Founding members of the EEVC and honored

as the Founding Father at the 25th Anniversary Dinner of the EEVC. He was a board member of the America on Wheels Museum in Allentown, scheduled to open in April of 08, and a member of the Boyertown Museum of Historic Vehicles.

Guy was a veteran of the United States Military where he served three years in the



Guy Davis, a founder of the Eastern Electric Vehicle Club, has died at 72..

Marines and retired after serving 17 years in the US Air Force. In the Air Force he helped to service the batteries used in the missile silos of our defense system, and C & D Battery Company recruited Guy to work for them upon his retirement from the Air

Force. He started at C&D in 1973, and moved to East Norriton the same year. In the mid 90s he retired from C&D and immediately began working at Yuasa-Exide in Allentown.

Guy was born in Elmira, New York on May 1, 1935 and was the son of the late George and Cleo Davis.



Guy emerges from the museum at the wheel of a Curtis Publishing Company truck built by Commercial Truck Company of Philadelphia.

Surviving are his wife Beverly (Anderson) Davis; one son, Guy Davis Jr. and his wife Teresa of West Conshohocken; two daughters, Susan and Diane Davis, both of East Norriton; one brother, Louis Davis of New York; a sister, Helen Jarman of N.C; and three granddaughters: Jessica, Sara and Anna.

The viewing was held at the Volpe Funeral Home at 707 Germantown Pike in Norristown. The funeral was conducted Friday morning at 9:00 AM in a very simple service at the graveside at Riverside Cemetery a few miles from Guy's home.

Guy's daughter, Diane, spoke briefly at the graveside in a soft voice, saying that her father's life could best be described by a short essay on how to live life, written by Steve Jobs.

"Your time is limited, so don't waste it living someone else's life. Don't be trapped by dogma 3 — which is living with the results of other people's thinking. Don't let the noise of others' opinions drown out your own inner voice. And most important, have the courage to follow your heart and intuition. They somehow already know what you truly want to become. Everything else is secondary."

Some thought from Oliver Perry

As we left the graveside all of us were in agreement that Guy had lived the advice cited in the reading. Tullio Falini whispered to me that Guy reminded him of the man in a New Testament parable who at first refused to take an assigned task but who went out and later performed it. Meanwhile an other worker did not do what he in the beginning had agreed to do. Guy, as Tullio put it, went out and did



Guy driving the C&D Omni in one of many parades; his wife, Beverley rides in the passenger seat.

things for the causes which benefited the rest of us. The parable implies that while Guy was working, some didn't even begin doing what they said they would. Guy was a doer.

Guy's son invited all of us who attended the funeral to accompany the family to Guy's house for refreshments. There we learned more about Guy and got to meet his closest family members. In the living room we swapped stories that each of us had about Guy and his adventures. It was hard to believe that Guy was no longer with us to join in the conversation or inform us of a new adventure.

Some thoughts from Dave Goldstein

I am so sad to hear this. I have known Guy for many years, chiefly as the EV "soul" of the Boyertown Museum as well as EEVC, and as a former employee of C&D Battery, I believe. I had no idea that he was ill. He will most certainly be missed. My condolences to his family and to all who shared in his knowledge and friendship.

Dave Goldstein
President, EVA/DC

Guy was interested in lead-acid batteries of all types, but he was especially interested in high-rate batteries. While working at C&D he developed several innovative designs for high-rate applications, and after C&D continued to work on them.

Guy also founded a car company. In 1990 the state of Pennsylvania put out a request for proposals under the Energy in the Environment and Recycling Technology program, which had as one of its goals the building of



Present and former EEVC officers who were pall bearers for Guy at Riverside Cemetery in Norristown

an electric passenger vehicle that could serve as the design and engineering platform for further development of a production prototype electric vehicle. Funding was offered and bids were solicited.

In response Guy started a company called the Eastern Electric Vehicle Development Group. He was president, Peter Cleaveland was vice president for technology, and Dr. Pritpal Singh and Professor William Koffke, both of Villanova University, were consultants/advisors.

The company submitted a proposal for an EV that would go 100 miles on a charge with conventional lead-acid batteries or up to 300 miles with advanced high-power batteries. It would weigh 1350 lb without batteries and 1800 lb with them; this would be achieved by building a monocoque body/chassis out of aluminum honeycomb and braided carbon fiber and glass fiber tubes. The car would be powered by four brushless dc motors rated for 10 hp each which would give a top speed of 75 mph.

Another company won the bid, but once the agencies involved learned the reputation of that company (which will remain unnamed here) the state cancelled the whole project.

As a member of the board of the Boyertown Museum of Historic Vehicles Guy was a driving force behind the development of the museum's EV exhibit. Originally housed in an ex-store room at the old 28 Warwick Street location (cleaned out and painted by a crew of EEVC members), it eventually became a major part of the exhibits at the museum's new home at Third & Walnut Streets (where EEVC members also pitched in to clean up and refurbish the building).

Guy built a number of EVs himself. The



Anna Davis Jr., Guy's grand daughter proudly shows off the antique Buick that Guy recently fell in love with, purchased and had treated as a queen. The car, parked in Guy's driveway, has been the marker to identify the Davis residence in recent months. Note the license plate.

first was his Blue Max, a 1969 Toyota with an aircraft starter/generator for power; later he started on a composite-body pickup truck on the chassis of a VW Squareback, but he gave that one up before it was done. He did find a use for the VW engine, however: he put it on a trailer with three 120 V aircraft alternators to make a range maximizer, and delivered a paper on it at EVS 9 in Toronto in 1988.

His usual transportation for some years was a 1980 Dodge Omni, purchased by C&D Batteries as a rolling battery test bed. Over the years the car had a succession of battery types; Guy was surprised when, after suffering with a worn-out set of batteries he put in some computer backup batteries. They were smaller than the originals, so he put in two sets in parallel. The parallel connection greatly increased the available current, and he was surprised when, on the first ride with he new batteries, he smoked the tires. Like the Blue Max (which passed through several hands and became the Red Max), the Omni ended up in the collection of the Boyertown Museum.

GUY DAVIS MEMORIAL FUND ESTABLISHED

The EEVC is establishing a Guy Davis memorial fund. All those wishing to contribute please send a check made out to the eevc with a note that it is specifically for the guy davis memorial fund. Send the check to Tullio Falini Jr., 437 Sharpless Street, West Chester, PA 19382. Please indicate that your donation is to the Guy Davis Memorial Fund.

Our plans at this time are to place a permanent plaque or suitable memorial in part of the Boyertown Museum associated with the

battery electric cars that Guy worked so hard to restore. In addition we hope to present a special award to a high school battery powered electric car program in honor of Guy at the upcoming "21st Century Automotive Challenge" Your timely contributions will be greatly appreciated.

**21ST CENTURY
AUTOMOTIVE CHALLENGE
"LAST CALL"
Oliver Perry**

June 9th, the EEVC hosts the annual competition of the Spirit of the Tour de Sol on the campus of the Burlington County Institute of Technology (BCIT), on Woodlane Road in Westhampton, New Jersey, on the outskirts of Mount Holly. Three primary events will take place. An all-day autocross put on by the Sports Car Club of America (SCCA) beginning with an informative teaching session in the morning, a Drive to the Shore Road Rally of 150 miles for regular, diesel, bio-diesel, and hybrid cars, and the usual battery powered car competition. The battery powered cars will have tech testing, acceleration and braking tests, and an efficiency run followed by the autocross event. Ron Groening is still exploring the possibilities of having a demonstration electric scooter wheel chair type event.

Alan Arrison is the only EEVC member to have officially entered an electric vehicle in



Paul Kydd checks underneath the S-10 plug-in hybrid conversion

the competition. Ron Groening, Ed Kriebick, Tullio Falini, Meredith Murphy and Mike Saboe are club members who have officially entered their Hybrid cars in the Drive to the Shore. Ken Wells, the director of the Boyertown Museum of Historic Vehicles, plans on bringing down the old Detroit Electric. We still have room for "on site" entries and are encouraging people to participate. As Paul Kydd has stated on more than one occasion, it is unbelievable how few people with electric and hybrid cars have responded to what we feel is

a great opportunity to promote the use of fuel saving transportation. What we had hoped would be a "grand statement" on behalf of the EEVC and alt-fueled and hybrid cars, has turned out to be more of a penciled in field on a paper napkin. As the press indicates, the American public won't start paying serious attention to events like ours until the price of gasoline goes well over \$4.00 per gallon.

In the battery powered car division we have about 5 to 7 entries, including several from our own BCIT-BCC Burlington County Electech team. Three high school teams from outside New Jersey also have entries. We will feature them in our next newsletter.

The NESEA volunteers of the Tour de Sol from the North Country are putting on a last minute rally to our cause. As Ambrose Spencer, a dedicated and committed enthusiast to the TdS for many years, recently stated, we now have more volunteers coming to judge and regulate our event than participants! Dave Goldstein and some members from EVA/DC have been rallied by Ambrose and will be joining us. Jerry Asher will enter his Prius into the Drive to the Shore event, swelling our ranks to a more noticeable size.



Work on the Olympian

The local county newspaper thus far has not responded to our phone calls, personal visits, and press releases. So we have had little success in getting local advertising for our event. It will be a small Saturday event, but exciting to the participants who have become involved. West Philly is coming with its nationally known Hybrid Attack. Hopefully the Philadelphia papers will cover them as well as they have in the past.



Work on the BCC electric Cougar getting ready for June

Be there Saturday evening!

Saturday evening Nancy Hazard will address our buffet and technical report, award ceremony, with a talk presenting the Tour de Sol from an historical perspective. Her question will be, "Where do we go from here?" Be present for the answer.

By the time you read this it will be too late to reserve dinner. Bring a bag lunch and join us. We will meet at the Fire Training Center on the east side of the BCIT campus. Start time will somewhere between 6:00 -7:00 PM. We will present an award to one of the student teams in honor of Guy Davis.

Sunday, June 10th many of the cars that participated in Saturday's activities will go on display at the annual Burlington County Earth Fair held at nearby Smithville Park, located between Woodlane Road and Route 38 east of Mt. Holly. Time of the event, between 10:00 a.m. and 4:00 p.m.

We want to publicly thank Mr. Bill Hennessy of the Mid Atlantic Renewable Energy Association, located in the Pottstown PA region, for a significant contribution to our event. As we discussed in our last meeting, we need contributions to cover the costs of hosting this event. Regretfully we still have been forced to ask our volunteers to cover their traveling and food expenses.

Check out our website www.eevc.info for the latest. Lindy Groening has been doing a splendid job trying to keep up with all of our last minute updates.

JUNIOR SOLAR SPRINT MAY, 2007 Oliver Perry



(left to right): Teacher Virginia Friedman, pupil Jeremy Wright, EEVC president Oliver H. Perry, EEVC Membership coordinator Ron Groening, EEVC member Alan Arrison presentation of the EEVC Over-all Best Car Award.

Sunday May 20, 2007, dawned cool and overcast. Mr. and Mrs. Ron Groening, Alan Arrison, and I reported as planned to the North side of the Franklin Institute to assist in judging the Jr. Solar Sprint Cars for technical merit and to select the EEVC's best overall car award. As most of our readers know, the Philadelphia Solar Energy Association (PSEA) puts on an annual contest for middle school aged students called the Jr. Solar Sprint. A national organization establishes the guidelines for the Jr. Solar Sprint. Students are provided official guidelines and specifications for building their cars. Only specific solar panels and electric motors can use for building a toy sized electric powered car which races along a guide wire on a track of approximate 35 feet in length.

Host sites for racing the cars and awarding prizes are scattered around the nation. The number of sites available depends upon the number of persons or organizations willing to host a Jr. Solar Sprint event. PSEA provides the Jr. Solar Sprint competition for the Delaware Valley at its annual Franklin Institute invitational. Any middle school or middle school aged student may enter. Selected winners are allowed to compete in a national Jr. Solar Sprint championship, usually held in New England in early June. Lisa Rose Bryant is the PSEA coordinator responsible for organizing the annual Philadelphia Jr. Solar Sprint event and deserves special credit for her efforts. Each year she faces unexpected hurdles as the weeks count down to race day. This year she was unexpectedly notified a few days before the scheduled event that a last minute parade preempted it. Lisa had to quickly change the Jr. Solar Sprint event to the following day. Unfortunately the sun which shined Saturday didn't come out on Sunday until after the race was over. Therefore all cars had to run on batteries instead of using their solar panels.

Alan, Ron, and I inspected all of the cars, approximately 80 entries, and rated them on craftsmanship, durability, and technical merit while Ron's wife helped register the cars and assign them numbers.

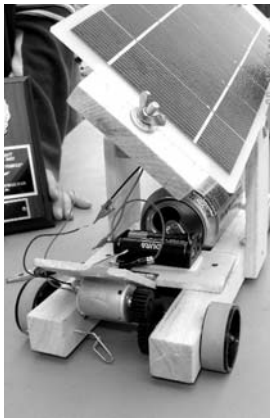
The overall EEVC Best Car Award went to a highly motivated student by the name of Jeremy Wright from the Philadelphia School. According to his teacher Virginia Friedman,



"Jeremy is a sixth grade student with a wide range of interests. He studies advanced physics and mathematics in independent study. Jeremy has been working experiments with robotics since age 7 and is assisting with installing a robotics lab in his house." Jeremy says, "I couldn't

have done such a good job on my car without a great Dad (Mr. Fred Wright) who encouraged, advised, and loaned me the right tools!"

Teacher Virginia Friedman told me that she teaches science and language arts. The solar sprint car project was a part of a mini course for approximately 20 students. She brought 12 students to the Sprint contest with 7 cars. "Jeremy," Virginia said, "is a great student and good thinker with excellent technical skills."



As you will note in the picture of Jeremy's car it is well constructed out of lightweight balsa wood. His solar panel is mounted on a universal joint type mechanism which allows the panel to be placed in such a position that the sun's rays will hit perpendicular to the panel no matter the direction of the

track or the position of the sun. He also had a unique car body hinged panel and suspended motor which allow him to quickly and easily change gears for maximizing performance. Such creative design work and craftsmanship made his car an easy pick for the overall best car of the 2007 event.

We were also asked to help PSEA select the "Creativity Award" The winner of this award was given a special demonstration electric motor kit (which will take hours of tedious work to put together.) Brendan Kitterage, age 14, of Ardmore, Pa was the worthy recipient. Ron Celentano, member of PSEA, and the Principal/Engineer of Celentano Energy Services (CelentanoR@aol.com) provided the award. Ron was happy to see Brendan

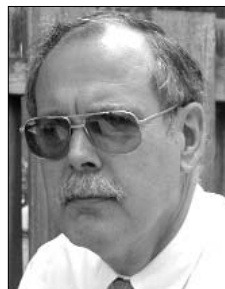


win it. Brendan's Ice Salamander 2.0 solar model car had a number of unique features. He adjusted his solar panel direction with 4 adjustable supports.

He constructed a cushioned front bumper so that when the car reached the finish line it would not be damaged when it hit the barrier at high speed. This is the 5th year that Brendan has won an award in the Philadelphia competition. He won first place for speed in the local competition last year and honorable mention in the Regional Championship in New England.

Brendan worked alone in his basement creating his car out of straws, plastic bottles, balsa wood, and Velcro. It was his creative use of simple basic materials put together on his own that earned him this year's creativity award. In his own words, "Over the last 5 years at every event I have learned a great deal and had a great time. Over the summer I plan on attending a solar energy workshop camp and I plan on returning to the Jr. Solar Sprint competition next year as a volunteer helper." His Mom, Allison Zito, who was in attendance, was very proud of her son's accomplishment.

EVS GETTING EASIER TO FIND By California Pete



I attended a couple of events recently that sowed that EVs are alive and well around here; it also showed that their presence also tends to have a distinctly California flair.

On My 22 I attended a two-in-one trade fair in Santa Clara; half of the event was labeled Cleantech 2007, and it was concerned with all manner of clean and green things, but for EVers one of the interesting displays was from Green Vehicles (www.greenvehicles.com) in nearby Los Gatos, a dealer for ZAP. They had three vehicles on display:

The most familiar was a ZAP Xebra three-wheeler with a pickup body, with stated top speed of 40 mph and range of up to 40 miles



with opportunity charging; 25 miles otherwise. The price was shown as \$11,000.

Also on display was

something called the H3 Hummer, from American Custom Golf Cars, Inc. in Chino, CA (www.californiaroadster.com). It's priced the same as the Zebra, and touts a range of up to 70 miles, as well as a top speed of 35 mph.



The kicker is that the literature says "street legal model available," which one suspects means it's classified as an NEV, and

who knows what that will cost. Still, it looks pretty neat, and is also available with bodies made to look like a Cadillac Escalade or a hotrod roadster.



The third was an electric motorbike from Skeuter called the Hornet that claimed a 40 mph top speed with a 1500-

W motor and up to 40 miles range; list price was \$1995.

A few days before that I attended an event called the Maker Faire, held in San Mateo. According to its publicity it "celebrates arts, crafts, engineering, science projects and the Do-It-Yourself (DIY) mindset." There were projects on display of all sorts, including many robots; strange vehicles powered by electricity, pedals, biodiesel, and who knows what else; and lots of "artwork" that periodically gave off huge flames. One of the "vehicles" was something called Neverwas Haul, essentially a self-propelled three-story victorian house on wheels, in the sprit of Jules Verne, according to its makers.



Tucked in among all the madness were a fair number of EVs. One was the Lightning Motors lithium-powered

superbike. Built from a Yamaha R1, it packs 28 lithium iron phosphate batteries rated 90 A-hr at 3.2 V and weighing 3 kg (6.6 lb) and propelled at up to 100 mph by a 70 hp motor.



Also on display was the current incarnation of the Corbin Sparrow. Corbin went belly up a few years ago, and the remaining assets (essential-

ly a bunch of partially-completed three-wheelers) was purchased by Myers Motors. They've brought the vehicle out again, under the name NmG, in somewhat modified form (there's an actual little trunk under that bustle in the rear) with a new price of \$25,000. Top speed is 70+ mph and range is 30 miles. Myers feels they can make money at that price; we'll have to see.

NEWS UPDATE

GM signs PHEV battery development contracts

The Associated Press reported on June 5 that General Motors had awarded contracts to Michigan-based Compact Power Inc. and to Continental Automotive systems, with the idea that the resulting batteries could be used in the Chevrolet Volt. GM Chairman Rick Wagoner also said that the company would like to produce the Volt as soon as possible — but did not give any dates.

U.S. wind power growing fast

While wind power accounted for only 0.64 percent of electricity generation last year, according to a June 4 Investor's Business

Daily article by Paul Katzeff, that's still 25.8 billion kWh, and it's growing quickly: 45 percent last year and 361 percent in the past decade. Much of this, says the article, is driven by economics. Projected costs per kilowatt hour of eventual output come to \$1206, compared to \$2081 for Nuclear, \$1290 for coal and \$594 for natural gas-oil combination.

A June 5 Reuters article by Bernie Woodall quotes predictions made at American Wind Energy Association's annual conference that "[t]he U.S. wind power industry will see half a trillion dollars of investment by 2030 to take the renewable source up to 20 percent of U.S. electricity generation".

Tesla gets R&D \$ from CARB

On May 25 Tesla Motors announced that it had received \$561,000 for the development of a UL approved 16 kW public charging station from the California Air Resources Board and California Energy Commission.

Tesla inks \$43M deal with Think

On May 22 Tesla Motors announced that newly formed division Tesla Energy Group had signed an agreement to supply Think Global of Norway with lithium-ion battery packs for TH!NK city EVs. The agreement covers the development and delivery of battery packs starting in December 2007 and continuing through 2008. The supply agreement represents up to \$43 million in revenues, of which approximately \$3 million is expected to be realized in 2007 with the remainder in 2008.

Algae-based biodiesel a comer, says firm

Green Star Products, Inc. (San Diego, CA) says that it has received serious interest in producing biodiesel from algae globally, with companies from more than 20 countries have expressing interest in the company's biodiesel and microalgae technology. Numerous inquiries have also been received across the U.S. Green Star attributes the increased interest to a two-minute documentary-type news video from Continental Airlines that discusses new technology, plus a 15-minute interview with president Joseph LaStella.

NYPD to buy Segways

On May 16 Segway, Inc. reported that the

New York City Police Dept. has purchased a fleet of 10 Segway Personal Transporters it will deploy on patrols in city parks this summer. The units are expected to be used for security patrols in Central Park, Coney Island and other city parks and beaches.

COMING EVENTS

Fuel Cell 2007

June 14th - 15th, Rochester NY. Contact Marsha Hanrahan, marshah@infowebcom.com or go to www.fuelcell-magazine.com/fc_2007_conf_index.htm

Mt. Washington Alternative Energy Days

June 17-18, Pinkham Notch, NH. contact Amy Kuzma at the Mt. Washington Auto Road at 603.466.3988, amy@mt-washington.com or visit www.MWAED.com.

Green Grand Prix

July 6, Watkins Glen, NY. Contact Bob Gillespie <rgillesp@roadrunner.com> 315-536-7185 or go to www.glenspeed.com.

Duryea Day #42

Sept. 1, Boyertown, PA. Call 610-367-2090 or go to www.boyertownmuseum.org.

Panasonic World Solar Challenge

October 21-28, Australia. Call 61 8 8463 4500 or go to www.wsc.org.au

Michelin Challenge Bibendum 2007

Shanghai, Nov 14-17. Contact mail.challengebibendum@fr.michelin.com, www.challengebibendum.com

EVS 23: Sustainability: The Future of Transportation

2nd - 5th, Anaheim, CA. For information go to www.electricdrive.org/evs23.

MEETING SCHEDULE

Meetings are held in Room 49, Plymouth-Whitemarsh High School, 201 East Germantown Pike in Plymouth Meeting, PA, and begin at 7:00 p.m.

September 12

October 10

November 14

December 12