



EEVC NEWSLETTER

Published by the Eastern Electric Vehicle Club

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Vol 28 No 10

OCTOBER, 2008



Now affiliated with EAA

EEVC GOES TO KEMPTON Oliver Perry

The annual Pennsylvania Sustainable Energy Festival 2008 was held for three days among the cornfields of Kempton PA, the weekend of September 20th. The EEVC participated with the display of the BCIT Ford Escort (called the Olympian), EEVC member Alan Arrison's VW pickup, newly arrived EEVC



EEVC member Ken Barbour answers questions about his recently converted dazzling yellow Geo Metro convertible for one of the many young ladies that were constantly attracted to his site at the Kempton Sustainable Energy Fest

member Ken Barbour's converted Geo Metro, and the BCIT plug hybrid S-10 pickup truck converted by EEVC member Dr. Paul Kydd. The four of us also participated on several EV conversion discussion panels held in the transportation tent. The program was initiated and supervised by MAREA (Mid Atlantic Renewable Association) and EEVC

member Phil Jones.

The weather was perfect. The crowds were large and very enthusiastic. There were many serious visitors, some who drove for three to four hours distance to learn what is happening in environmental related businesses. Many were very interested in learning more about electric and

hybrid cars. For the three days we had little time to waste and we had no time to become bored. We were constantly answering questions for people and explaining how our vehicles worked. We also found ourselves engaged in political topics of relevance. The whole scene reminded me of the atmosphere we used to experience in the early days of our



Penn State's EV-1 with a hydrogen fuel cell added sits next to one of the transportation tents. Dr. Joel Anstrom presented an excellent report on transportation energy efficiency technologies being studied.

club's existence. There is no question that the rising price of gasoline has piqued more interest from main street.

Everyone arrived home safe, including the Olympian, who last year had her motor blown up by a failure on my part to take her



The Snap-On, tool company sponsored prizes at the 21st Century Automotive Challenge held this past June at Burlington County Institute of Technology, Burlington County, NJ. The Snap on Banner is on the side of the transportation tent at the Pennsylvania Sustainable Energy Fest in Kempton PA. The BCIT Olympian and EEVC member Alan Arrison's VW pickup lined the entrance to the tent.

out of first gear when I towed her home. As for the replacement motor donated by Dr. Paul Kydd, it has performed well. The



Number 14 in the Tour de Sol "The Lomax" from Methacton High School(John Murphy's original entry)



Instructor Simon Hauger and four student team members stand next to the West Philadelphia High School Biodiesel sports car. This particular car has been featured on the Discovery Channel. West Philadelphia High School is the only high school selected to compete in the Progressive Insurance X Prize Challenge.

Olympian was test driven after the show by a young fellow (Jesse) from an EV club in Connecticut. He hit speeds in excess of 60 mph accelerating up steep hills and remarked that the car was fantastic. I was glad he was



Methacton High School's Lomax and Alan Arrison's VW pickup on display outside the transportation energy tent

pleased and happier still to get back to the park in one piece. There were no wide open flat areas or test tracks near Kempton for Jesse to test drive the car so he made use of the hills and curves.

In a way the Kempton Fair was an EEVC



Methacton High School Instructors answer questions for the students gathered around their display on Student Day.

homecoming event. Bill Visher and his son appeared, followed by Ed Kreibick and his son. Chester Lovelace stopped by, and later John Murphy. Yes and even Mr. Bush paid a visit. (That is EEVC member Reid Bush from Honey Brook, PA). Several members whom I have not seen in many years also stopped at our site, but unfortunately I was unable to recall their names. If I overlooked any of you, please forgive me.

West Philadelphia High School and Methacton High School brought their vehicles for one day displays. It was great to have them there.

All in all it was a blue ribbon EEVC experience.

An unusual car



Eugene Wright, and his equally enthused wife Lucille, drove to the Pennsylvania Sustainable Energy Fest held in Kempton in their home built two seater vehicle which gets 70 miles to the gallon.

Eugene Wright from Drums, PA, an industrial maintenance mechanic, took the engine and drive train from a VW Jetta and built his own three wheeled two seater behind it. He included a squeezed section of the dashboard. The tear drop shape Eugene had in his head for years. He used standard sandwich core construction insulation foam board and layered the sides with fiberglass. His windshield and rear window were heated and shaped from Lexan plastic by hand.

EEVC INSTRUCTION THE BOY SCOUTS OF BURLINGTON COUNTY Oliver Perry

Saturday, October 4th, Alan Arrison and I took our respective vehicles to a private outdoor recreational park in Lumberton, New Jersey where the Burlington County Boy



Scouts eagerly gather around EEVC club member Alan Arrison and the back of his VW pickup as Alan presents information on electric vehicle technology.

Scouts of America were conducting a week end camporee. Alan drove his vehicle to the event, a distance of 35 miles. He replenished



Scouts and leaders engaged in learning how the Olympian (left) and the VW pickup (right) operate.

most of the charge during the day from a 110 volt outlet. I drove 12.7 miles to the site and back home again without receiving any additional charge, a total of 25.4 miles. We both felt good driving our electrics to and from the event.

The focus of the camporee was on future technology. Approximately a dozen troops from the county passed our station in separate groups throughout the day and listened



A Troop Leader of Troop 25 (the eventual winners of the contest) looking under the hood of Alan's VW pickup while his team huddles around the test behind him.



Troop 25 from Delran, New Jersey is the proud winning team who placed first place on our test, missing only two questions.

to us explain how our vehicles operated. Each troop was then given a four page test for competitive purposes to find out which troop retained the most information from our presentations. We even included a part identification section where the scouts had to identify various components and parts which were numbered on index cards taped to the parts. The scouts and all of their leaders were very interested in our cars. The day flew by quickly. Our presentation was greatly appreciated by the BSA leadership. Both Alan and I appreciated the opportunity to work with the scouts and learn a little more about their challenges in molding the young men of America.

KICKGAS FESTIVAL

The NEDRA Nationals & Kick Gas Festival is scheduled for the weekend of October 11-12, at the at the Barona Drag Strip in San Diego. Saturday will be devoted registration, to camping and to music, with entertainment by Deadline Friday, The Cathryn Beeks Ordeal, SweetTooth and six other bands. Sunday will be race day, with the Electric Vehicle Drag Racing Championships (see 100% Electric Vehicles Race down the track at 100+ miles per hour), an Alternative Vehicle Show and an ECO Vendor Fair. In addition special guest Chris Paine, writer and director of “Who Killed the Electric Car,” will be at the festival filming for his new movie “Revenge of the Electric Car.”

For more information, go to www.kickgas-festival.com.

KEEPING UP THE RACE TO GREEN By California Pete



California and its innovators are getting more and more on the green bandwagon — and green innovators and entrepreneurs from other areas are likely attracted to California’s atmosphere of innovation and sources of venture funding.

A recent entry reported by the *San Francisco Chronicle* is Solazyme, located in South San Francisco, which claims it has produced the world’s first algal-derived jet fuel. “The company genetically modifies algae from around the world to consume a wide range of feedstocks, such as wood chips, switchgrass and sawdust. When the algae consume more of these substances than they immediately need, they produce oil as an energy storage mechanism,” says the *Chronicle*.

All this sounds very nice, and a carbon-neutral jet fuel is a worthwhile goal, but having to start with biomass (or industrial byproducts such as crude glycerol) instead of water, sunlight and a few minerals, seems like a limiting factor.

Tesla to build EV plant in San Jose

A few moths ago we published a notice that Tesla Motors had decided to build the plant to manufacture its new Model S sedan in California. The company announced on September 17 that it has selected San Jose for the \$250 million factory, which turns out to be the biggest business deal in the city for at least a decade.

The plant is scheduled to open in 2010, and will employ about 1000 when fully operational.

Stealing the sun

While commodity prices have been dropping rapidly recently, prices paid for scrap metal have been high for some time — high enough that thieves have been stealing anything made of metal that’s not nailed down, and some things that are nailed down. Perhaps a new low was reached when somebody ripped off a bunch of bronze urns from local cemeteries — some with human ashes inside.

But now enterprising thieves have found something new to plunder: solar panels. A story by Kate Galbraith in the September 24 online *International Herald Tribune* reported that burglars are increasingly making off with photovoltaic panels, often attempting to sell them on Craigslist or eBay. Perhaps this attracts a higher — or at least more tech-savvy — class of crook, as the metal thieves have mostly been trying to sell to scrap metal dealers. State authorities are working on laws that would require dealers, according to the *Chronicle*, “to photograph every seller and their goods, take thumbprints, keep extensive records and pay out only after a three-day wait.” How well that will turn out remains to be seen.

Museum reopens

Bringing national attention to San Francisco is the September 27 opening of the new California Academy of Sciences. While the museum’s displays are breathtaking, much of the news reporting has centered on the building’s design by Italian architect Renzo Piano, which gains it billing as the greenest museum building in the world. As CNN puts it, “The new academy in Golden Gate Park is insulated with nontoxic, second-hand jeans and capped with a 2.5-acre living roof planted in native wildflowers,” including wild strawberries and other species. The roof is expected to capture 3.6 million gallons of rainwater a year.

We don’t get into the city very often, but hope to visit the museum; when we do we’ll give you a report.

PUC pushing energy self-sufficiency in buildings

California has the enviable distinction of having kept its energy demand flat for the past several years despite a substantial increase in population, and if the state’s Public Utility Commission gets its way we’ll move out in front of everyone. On September 18 the PUC adopted a plan that would require that “new residential developments in the state would need to be ‘zero net energy’ by 2020,” according to the *Chronicle*. “That means they would generate most of their own power and feed any excess to the state’s electrical grid. The same standard would apply to

commercial construction starting in 2030.”

There are still some political hurdles, but it looks like a good move — if the current economic situation doesn’t cut it short.

NEWS UPDATE

GM reveals Volt design

On September 16 (the company’s 100th anniversary) General Motors unveiled the production version of the Chevy Volt, and said it would hold to its schedule of having it in showrooms by late 2010.

The production body has considerably better aerodynamics than the bull-nosed concept car shown at the 2007 North American International Auto Show in Detroit, which was deemed essential to allow the car to go 40 miles on its 16 kWh lithium battery. The Volt’s electric drive unit delivers the equivalent of 150 horsepower, 273 lb-ft. (370 Nm) of instant torque, and a predicted top speed of 100 miles per hour.

Other features include independent McPherson struts front, compound crank twist axle rear, four-wheel disc brakes, full regenerative brakes and electric power-assist steering.

Chrysler shows three EVs for 2010

A September 24 AP story by Tom Krisher reports that Chrysler had unveiled three prototype EVs, and promised to put one into production by 2010. The company didn’t say which of the three shown — a Dodge sports car, a four-door Jeep Wrangler and a Chrysler minivan — would be chosen for production.

Chrysler, like other automakers, is hoping for a chunk of the \$25 billion loan program Congress has been considering, but, according to the story, will go ahead with the EVs even if the federal dollars don’t materialize.

The company also showed a low-speed neighborhood electric vehicle (NEV) called the Peapod with a range of 30 miles, planned for European introduction after 2010.

Ford gets federal \$10M for PHEVs

AP reported on October 6 that Ford Motor Co is receiving a \$10 million grant from the U.S. Energy Department to develop PHEVs. “The funding ... will help the automaker con-

tinue to develop its demonstration fleet of 20 plug-in hybrid vehicles. The project costs \$20 million, so the government is funding half of the program,” according to AP.

Ford may need the help: on October 6, according to AP, Fitch Ratings downgraded the company’s credit rating from B to CCC, moving essentially from junk to garbage, “projecting that the automaker could burn through so much cash it will reach its minimum operating levels in the second half of next year.”

San Antonio to sell sewage methane

The city of San Antonio, TX has embarked on a venture that will, it hopes, net it some green while being green.

According to a recent AP story, “the city-owned utility’s board of trustees approved a contract ... to provide at least 900,000 cubic feet of natural gas daily for the next 20 years to Ameresco Inc., a Framingham, Massachusetts-based energy services company.”

The plant generates about 1.5 million cubic feet of gas per day, so selling some of it should bring in some needed cash. One wonders, however, what they did with all that gas before. Vent it?

Lots of EVs at Paris auto show

With the rising cost of fuel more and more companies are showing hybrid and straight EV concept cars. Standouts at the Paris Auto Show included the Nissan NuVu (below),



designed unabashedly for urban driving, with 2 +1 seating. a length of 3 meters (9.8 feet), a driving range of 125 km, top speed of 120 kph, and a laminated lithium-ion battery with an energy density of 140 Wh/kg.

Also on display was the Renault Kangoo Be Bop ZE, a so-called mini minivan (see top of next column) with, oddly, what appears to



be iridescent yellow-green windows; an electric version of the Smart ForTwo; and the MPV, a compact six-seater from Optimal Energy in Cape Town, South Africa.

COMING EVENTS

Kick Gas Festival 2008

October 11-12, San Diego. For information go to www.kickgasfestival.com.

Convergence 2008

October 20-22, 2008, Detroit, MI. Go to www.sae.org/events/convergence/ or call 626-744-5600.

Electric Drive Transportation Association Conference & Exposition

December 2-4, Washington, DC. Go to <http://edta.orchidsuites.net/sites/conf2008/>

2009 SAE World Congress

April 20-23, 2009, Detroit. For information go to www.sae.org/congress.

Challenge Bibendum 2009

April 26-29, Rio De Janeiro. For information go to www.challengebibendum.com.

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. As in previous years, there were no July or August meetings.

November 12

December 10

January 14

February 11