



EEVC NEWSLETTER

Published by the Eastern Electric Vehicle Club

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Vol 27 No 5

MAY, 2007



Now affiliated with EAA

THE 21ST CENTURY AUTOMOTIVE CHALLENGE COMPETITION TOUR-TO-THE-SHORE Paul Kydd

Plans are final for the fuel economy run/high mileage vehicle rally being held on June 9, 2007, as part of the 21st Century Automotive Challenge event, sponsored by EEVC. We are hoping to get a representative entry list of the most fuel efficient vehicles on

the road today to demonstrate just how much fuel they can save relative to the current average of around 20 miles per gallon and which has bragging rights, gasoline, diesel or hybrid.

The tour will begin with a driver's meeting at 9:00 AM at the Westhampton campus of



Paul Kydd and Tom Molnar, auto instructor at BCIT, looking at the combined Natural Gas and gasoline fuel system under the hood of Paul's S-10 pickup. Hopefully the vehicle will be available to compete in the "21st Century Automotive Challenge" coming up in June.

Burlington County Institute of Technology, at 695 Woodlane Rd., Westhampton, NJ. To reach BCIT take Exit 5 from the New Jersey Turnpike and keep turning left onto Route 541 North, then Irick Rd., back over the turnpike on Irick Rd. and finally onto

Woodlane Rd. From I-295 take exit 47B heading south on 541 and turn right onto Irick Rd. The tour will start from the automotive shop at the west corner of the BCIT campus. Enter the main drive by turning left from Woodlane Rd and drive all the way around the building to the far corner. Be sure to fill

your tank to the top at either the Valero station on 541 near the turnpike or the Exxon station near I-295. Your measure of performance is the amount of fuel you will need to refuel after the tour, so top it up before. Detailed route maps and instructions will be handed out at the driver's meeting. Attendance is a must, and timely attendance will be appreciated.

Following the driver's meeting, the entrants will be dispatched at one minute intervals allowing everyone to get started on the roughly two hour trip by 10:00 AM to arrive at the lunch stop by noon. The route will be east past Ft. Dix to the first check point at Lakehurst, then south down the shore to the Forsythe Wildlife refuge for lunch. We may be able to arrange a lunch at the Oyster Creek Inn, a down-home shore restaurant with sensational seafood if there is sufficient interest. Otherwise bring your own.

Following a restart at 1:00 PM, the tour will head to historic Batsto Village, the next check point, and then back to BCIT via Pemberton, NJ, reaching the finish by about 3:00. The finish will be at the Valero station where contestants will fill up again and turn in their odometer readings, check point times and fuel receipts from which the scores will be calculated. We should all be back at BCIT in time to catch the last of the electric vehicle events and displays.

Dinner will be served at about 6 PM at the fire training facility adjacent to BCIT. It will be buffet style catered by the food service training staff, who put on a very good feed. Following dinner, the results of the electric and tour events will be announced and the awards will be handed out. We should be finished by around 8 PM after a pleasant and instructive day on the front lines of the war against global warming and energy insecurity.

PRESIDENT'S MESSAGE **Oliver Perry**

Between the Power of DC electric drag racing event in Hagerstown Maryland the weekend of June 2nd, and the "21st Century Automotive Challenge," June 9-10th in Burlington County New Jersey, we have little time for sleep. (I might also mention that several of us will be involved in judging the Jr. Solar Sprint cars Saturday Morning May 19th on the street outside the Franklin Institute.)



Too busy to sleep!

This month's "President's Message" will focus on the "21st Century Automotive Challenge" coming up the weekend of June 9th and 10th.

History of the upcoming "Spirit of the Tour" Automotive Challenge

As most of you already know the annual American Tour de Sol electric and alternative fuel automotive competition was not funded nor sponsored by the Northeast Sustainable Energy Association (NESEA) in 2007. We (the EEVC) were given permission by NESEA to host a replacement event for those participants who wished to compete in or display in a Tour de Sol type event in 2007. Our event, called the "21st Century Automotive Challenge," is a scaled down version of the Tour de Sol both in size and scope. NESEA sent their former participants and volunteers information regarding our event and referred all related inquires pertaining to the Tour de Sol which came to their office, to us.

The Burlington County Institute of Technology (BCIT) allowed us to host our event on their grounds Saturday June 9th with the provision that we procure a million dollar coverage insurance policy. The premium, approximately \$1500, hopefully will be our largest single expense. The funding for our event is raised by the efforts of the Burlington County Electechs, a consortium of Burlington County College (BCC), BCIT and the EEVC. The Electric Auto Association (EAA) of which the EEVC is an affiliate chapter has graciously promoted our event in its newsletter Current Events.

Both Nancy Hazard, who recently retired

from NESEA, and the newly hired executive director of NESEA, Mr. David Barclay, were very helpful in providing us information and resources for hosting our June event. A number of NESEA volunteers (those individuals who worked behind the scenes to produce and manage the Tour de Sol) have also been very helpful in advising us how to best operate the 21st Century Automotive Challenge. But the best advice, contacts, and referrals were insufficient for us to overcome the two most important factors needed in organizing such events, time and money. We didn't know we would be undertaking this venture until the close of 2006. Six months is not sufficient time to procure adequate funding for a "Tour de Sol" type of event. And six months notice is not sufficient time for many participants, primarily the student teams, to raise their funds and prepare their vehicles for the competition. However, as each month has passed, the 21st Century Automotive Challenge" has evolved.

The single biggest challenge that faced us from the beginning was coming up with significant prize money in time to attract serious competitors. But our announcement of the event had to be made before we had time to raise funds. Without committed competitors it became even more difficult to attract sponsors for the prize money. And many sources of grant money take months to apply for.

Early on it became evident that few people accepted our initial entrance fees. There were no significant incentives for them to compete. We waited for the April 30th deadline for registration to arrive and then drastically reduced the entry fees to \$25 per vehicle.

There is always serious question as to whether or not the lack of significant prize money results in few entries. We had about a dozen vehicles verbally committed to the event but no cash in hand. In late February and early March I began to realize that alternative fuel enthusiasts are an entirely different folk from NASCAR people. Hybrid car owners and electric car enthusiasts do not seem to relish car competition. At one point I considered suggesting we cancel the event. But, a sudden interest in the Tour began after the last snow storm. Like buds coming out in spring, so did the Tour de Sol participants.

The depressing experience in the winter months helped me better understand why

NESEA had stalled in terms of sponsoring the Tour de Sol. Many still wonder why the Tour was discontinued for 2007 and possibly forever. A number of NESEA volunteers, several of whom served on the board of NESEA, provided me a list of reasons as to why the Tour lost momentum. As with the verdict in the documentary *Who Killed the Electric Car*, there are scores of villains, and some of them are us.

Many individuals associated with the Tour have changed their priorities. As one leader in the EAA recently said, "Life happens!" A large number of individuals in our EV and hybrid car organizations have suffered setbacks in personal and family well being. Some have experienced the death of family members, upsetting job related changes, and health issues. Regardless of how important alternative fuel ventures may be, they are secondary when it comes to life and death matters. And in that sense so is the "21st Century Automotive Challenge."

Pulling out of the nose dive.

The plane, running out breath because of a snow clogged air vent, was headed toward the ground. But thankfully, as Eugene Lemieux, an EEVC member and ex-owner of small plane related from a past experience, Eugene was able to provide the engine with enough air just in time to pull out of the dive. Before hitting the ground we have discovered that snow melts, spring arrives, and woodchucks come out of their holes. Teams and cars are coming June 9th and 10th. Be there.

We expect between 10 and 20 vehicles (but this number is growing) for the "Drive to the Shore!" A dozen electric and solar electric vehicles possibly may enter the competition. As of this moment we have six committed electric vehicles. (However, life happens and who knows anything for sure.)

There are at least two special display vehicles coming.

We have yet to finalize the autocross portion of the event. Several months ago the Sports Car Club of America verbally agreed to help us run this event. We planned to have the event open to anyone and any type of vehicle.

Ron Groening is still attempting to provide some type of electric wheel chair event, but as of yet those plans have not been finalized.

I have likened our event to a "Woodstock."

We are going to have a gathering like a family reunion. We will document with video as much of it as we can. As participants sign up we will decide with them what we are going to do. We may have to make some last minute adjustments, but that, after all, is the "Spirit of the Tour!"

Documentary to be made

It has been suggested that we make a documentary featuring the teams and cars that attend the "21st Century Automotive Challenge." We will be gathering as much video information at the event as possible for future use. I believe many would find a documentary that addresses the history and future of the Tour de Sol interesting. In addition to paying tribute to the "Spirit of the Tour" we plan to focus on the automotive challenge of the 21st century

There is limited prime space for cars to be exhibited at the Earth Fair on Sunday. We may not have room beyond my projected estimate. We have reduced our entrance fee suitable for a one day experience. Last minute entries should understand that we cannot guarantee them space Sunday. However we will certainly make every effort to do so.

Focus of the "21st Century Automotive Challenge"

Tuesday, April 24, 2007 in a special section of the *Wall Street Journal*, under the Headline "Shaping the Future," appeared an article entitled "The Quiet Revolution in Transportation." A sub title "The Rise of Efficiency" followed. According to the article, "The biggest story in transportation these days is not who builds the largest or fastest vehicle, it's who builds the most efficient means of delivering freight and passengers in an ever-more demanding and mobile global economy."

As I stated previously, "The 21st Century Automotive Challenge" is still evolving. But regardless as to what our final competitive rules will be and how we select this year's winners, the emphasis, recognition, and awards will be focused upon moving the most cargo per unit of energy. All competitors will be asked how their entry best meets the cargo per energy ratio in a safe manner. Safety first, efficiency second.

No doubt there will debate over how one

can fairly measure safety. How safe is safe? But, the focus of our event is to get people to begin to think in terms of safety in addition to energy costs per pound of cargo delivered. One challenge is to carry some cargo (people) safely at high speeds. Motorcycles are efficient but can they coexist safely on turnpikes with tractor trailers?

Some TdS events in the past were scored in such a way that large vehicles could not win the category they competed in. Although safety devices were required, many vehicles in order to be more competitive were designed to be as light as possible reducing, in some cases, structural integrity. We question the value of rewarding a best range vehicle or best fuel efficient vehicle solely upon performance without including the amount of cargo delivered. It should be cheaper to move two children from A to B with no added cargo than transporting 5 heavy adults with their baggage! In a real world we are not limited to transporting just light loads. The challenge is to move the most total weight for the least energy.

The lesson to be learned in the autocross event is that success involves driving skills, not pure horsepower. And the lesson to be learned in the drive to the shore is that the accelerator pedal determines the mpg. Our message to the public is we can save considerable fuel as a nation if we reduce our addiction to "pedal to the metal" starts followed by quick stops.

Lastly our goal is to include gasoline only vehicles in our competition as well as pure diesel vehicles. It is not practical to immediately eliminate "fossil fuel only" vehicles from our economy. Let us cooperate fully with efforts to make these cars as fuel efficient and environmentally friendly as possible. All of us should be working together for a better transportation economy and cleaner environment. Total independence from fossil fuel is considered by many to be unrealistic in the early part of the 21st Century.

We will not be able to perfectly measure our goals but at least we hope to continue the quest for cleaner air, less energy waste, and safer vehicles without sacrificing speed. It may be impossible to do it all without introducing tradeoffs. That is what makes it a challenge.

Nancy Hazard to address the “21st Century Automotive Challenge”

Saturday Evening, June 9th, Nancy Hazard will address visitors and participants of the “21st Century Automotive Challenge” to be held at the BCIT facilities. A buffet dinner and team presentations will precede Nancy's address. Specific times and details of the weekend's activities still have to be worked out. Call 609-268-0944 or 609-922-7275 for up to the minute information. Although some discussion regarding the history of the Tour de Sol may be presented, as well as possible tributes, it is Nancy's desire to focus on the present participating teams and “Where do we go from here?”

THE LEFT COAST KEEPS ON KEEPIN' ON By California Pete



The impression most non-Californians seem to have of California and Californians is in many ways justified. The first time you see a person walk into traffic paying absolutely no attention to anything but their cell phone conversation will convince you: these people really are on another planet (or on drugs). California traffic rules mandate that all traffic must stop for anyone in a crosswalk (and any intersection is a crosswalk, even if not marked). There are also crosswalks in the middles of some blocks.

From the state Drivers Handbook: “Stop at all crosswalks where pedestrians are waiting.” Note: not just crossing, but waiting. Maybe they're just hanging out. Doesn't matter.

Then this gem: “Remember — if a pedestrian makes eye contact with you, he or she is ready to cross the street. Yield to the pedestrian.” So you're supposed to look at the eyes of every pedestrian?

The result of this is that pedestrians just stroll into traffic without looking, blissfully sure that all traffic will instantly stop for them.

They wouldn't last five minutes in Philly or New York.

Oakland's bridge has fallen down

One of the features of the Bay Area is a spot called the Macarthur Maze, where I-80 (which goes over the Bay Bridge), I-880, I-580 and several other roads meet in a great spaghetti-pile of on-ramps, off-ramps and connectors.

In the predawn hours of April 29 a tanker truck carrying 8600 gallons of gasoline crashed on one of the connectors; the heat of the fire caused a section of elevated roadway above it that carried eastbound traffic from the Bay Bridge onto Interstates 580 and 980 and state Highway 24 to collapse.

The Maze is one of the most heavily-travelled places in the nation, and images of gridlock stretching from horizon to horizon immediately surfaced but — surprise! — it didn't happen. People adjusted, public transit temporarily reduced its fares to zero, and things moved again. Then on Monday the lower level (where the tanker crashed) was re-opened and it was announced that the collapsed upper section would be replaced by the end of June. This is well ahead of schedule and welcome news, because with both freeway sections closed the cost to the Bay Area economy has been \$4 million per day.

EVS getting some respect

EVs seem to be making it more and more into the mainstream. Tesla Motors was featured in several papers in the region, and a week or so ago CNBC's Power Lunch interviewed Steve Schneider, CEO of ZAP. It was mentioned that ZAP has just received an order for \$79 Million from a Chicago-based start-up, The Electric Vehicle Company, backed by two hedge funds, Diversified Equity Funding, L.P. and Diversified Strategies Fund, LLC, which both have an investment interest in ZAP. EVC will focus on sales of electric vehicles to municipalities, distributors, university campuses, auto and recreational dealers, foreign countries and the military. Schneider also mentioned that Domino's Pizza is planning to use ZAP vehicles in its delivery operations.

NEWS UPDATE

Report calls ethanol an air polluter

The April 18 online edition of *Environmental Science & Technology (ES&T)* reports

that a study by Stanford University atmospheric scientist Mark Z. Jacobson found that “a high blend of ethanol poses an equal or greater risk to public health than gasoline, which already causes significant health damage.” Computer simulations of conditions in the Los Angeles area found that E85 vehicles reduce atmospheric levels of benzene and butadiene, but increase formaldehyde and acetaldehyde, which means cancer deaths would likely remain the same but ozone levels would increase.

The report concludes that EVs or PHEVs or hydrogen fuel cell cars, which can obtain their energy from non-polluting sources, would be a safer alternative.

But we know that, didn't we?

GM shows longer-range Chevy Volt

At the Shanghai Auto show on April 20 General Motors showed a version of the series hybrid Chevrolet Volt concept car, this time with a hydrogen fuel cell system. The company claims a range of 300 miles (483 km), along with an extra 20 miles (34 km) from plug-in charging.

OK, GM, so how about starting production on at least some version of the car? Or would you put some out, let people grow to like them, and then crush them?

Mini Cooper EV

A story posted April 23 by Sam Abuel-samid on *Autoblog Green* reports that “Hybrid Technologies is working on a battery powered Mini Cooper that they expect to have on sale in 2008.”

Energy-producing highways?

Anne Moore sends at item she received from her brother-in-law Rae Hoopes. An item posted on engadget.com on April 30 by Darren Murph says that “student designs have proposed that major roadways be retrofitted with various forms of wind energy collection devices, ranging from overhead turbines that collect energy from quickly-moving cars below to barrier panels that harness the wind from closely passing vehicles moving in opposite directions.” Energy harvested could feed the grid, light-rail transport or intelligent billboards.

COMING EVENTS

21st Century Automotive Challenge

June 9-10, Burlington County, NJ. For information contact Oliver Perry, 609-268-0944, perrydap@aol.com, or visit www.eevc.info.

Power of DC Electric Drag Race

June 2-3, Mason-Dixon Dragway, Hagerstown, MD. Contact Chip Gribben at futurev@radix.net or Mike Harvey at mike@hevimotors.com

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.challenge-bibendum@fr.michelin.com, www.challenge-bibendum.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-Whitmarsh High School, 201 East Germantown Pike in Plymouth Meeting, PA, and begin at 7:00 p.m.

June 13

September 12

October 10

November 14