EEVC

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Now affiliated with EAA

CLUB MEMBER OF THE YEAR

Mike DeLiso, club member of the year

Mike DeLiso joined the EEVC in April, 1984. I quickly introduced Mike to the electric car projects that I was involved in at Cinnaminson High School. Mike became one of those helpful EEVC members who frequently rode to the rescue of a number of projects in need. In the mid eighties my second year physics students, as some of you may remember, worked on electric cars for grades. One spring afternoon Mike helped several of these students pass their final test by getting their converted VW Beatle to successfully run around the track. If my memory serves me correctly, among other things that Mike helped the students do on that vehicle was to repair a set of brush holders in an old Eaton Corporation fork lift DC electric traction motor.

Philadelphia Electric (through Carey Rowan's efforts) donated a Battronic Van to Cinnaminson High School in the early to mid 80s. A few years later the Battronic Van needed electronic help. Its charger failed to charge as rapidly as my students were charging (The good old days.). Mike showed up a number of times in attempts to find the source of the trouble. We never did fix the problem but Mike put forth a valiant effort.

In 1984, Mike took a field trip (Following an introductions by Ed Kriebick Jr.) to see member


Mike with one of his Electrak electric tractors

Clifton Land. One weekend of troubleshooting got Clifton's Flight Systems VW Bug conversion running, for the first time. In later years Dan Carlin purchased the car from Clifton Land.

Mike was EEVC Secretary in 1985 and 86. He graduated from Point Park College, Pittsburgh Pennsylvania in 1972 with a degree in electronic engineering technology. He joined General Electric and worked for about eleven years in the standards and instrument repair shop. It was here that Mike gained his expertise in the repair of DC motors, SCR controllers and battery chargers, and started installing GE EV-1 controllers in fork lifts. This is where Mike made his connection with Citicar and started doing repair work for a Delaware Chevy/Citicar dealer. Mike states, "They used to drop them off at my house in Bellmawr, New Jersey on a trailer. I got $200 a car to fix them."

While traveling the northeastern power plants, Mike picked up five Electraks. (General Electric electric garden tractors.) He uses them to mow his lawn, for snow plowing, another is an electric go cart, and the last for show and tell. Therefore Mike is one of our members who is currently the owner and operator of electric vehicles.

In July of 1983, Mike moved into General Electric's Nuclear Energy program where his job was to keep the DC-powered refueling equipment operational. It was a high pressure and higher reliability environment. He lived out of a suitcase for about twenty years traveling from one power plant to another, fixing what needed to be fixed. His last assignment took him to the midwest for five of six years. We lost track of Mike during this time except for his EEVC dues which were regularly paid. Last March 2003 Mike suddenly appeared at one of our monthly meetings. Before Mike had a chance to sat down, a brand new member by the name of Wayne Knight, an optometrist from Shamong, New Jersey (an unknown EV enthusiast living a few miles from my home) entered the room asking for help on an electric car project that he had initiated.

We plan on a feature article on Wayne Knight's unique vehicle later this year. It is called the VolksBaker. Wayne happened to acquire an electric 1980 Subaru Electric Van with a lot of spare parts. Using these parts Wayne planned on making an electric vehicle to travel to and from his office. The vehicle is a 1969 VW Beatle and frame with a 1955 Studebaker pickup truck body. Wayne is a VW car collector but was not proficient with electrical and electronic devices. He needed someone to guide and help him make his mechanical VolksBaker electric powered.

Before you could count to ten Mike and Wayne were looking over an old Lester charger and GE controller that Wayne had brought to the meeting. Within days Mike ventured to Shamong Township to Wayne's garage, struck up a deal, and begun work on Wayne's vehicle. As Mike put it, "We used recycled electrical components to bring the car to electric life." The car is now running within less than 10 months of Mike's arrival on the scene. Mike's ingenuity and "hands on genius" made defunct and dated electrical components function as they were originally intended to do.

It is for Mike DeLiso's steadfast commitment to the EEVC over the last twenty years and his enthusiastic expertise in helping Wayne Knight complete his VolksBaker conversion this past year that we proudly proclaim Mike, our Club Member of the Year 2003. Congratulations Mike!

GM JUST DOESN'T GET IT

The evidence is mounting that General Motors is not only an opponent of electric and hybrid vehicles, but foolish to boot. Let's start with the EV and hybrid part, then move on to general ineptitude.

The Anti EV

For the first part, we'll quote from (steal) this month's lead story from the Web site of our sister club, The Electric Vehicle Association of Washington, DC, written by Chip Gribben:

"Despite the popularity of the GM EV-1 and waiting lists for the high-tech vehicle, General Motors terminated their customer's leases and sent the cars to a crusher.

"GM wasted no time confiscating the cars in an effort to destroy them. Company officials cite the bottom line and weak sales as the reason for crushing the EV-1 program but owners and enthusiasts tell a different story.

Two views of crushed EV1s at GM's Desert Proving Grounds in Mesa, AZ

EVs are an intrusive technology. They remain a threat to an oil based economy and its supporting infrastructure and the only way to remove the threat is to crush it.

"This is not the first time GM waged its Scorched Earth Policy against a technological threat. In the 1940's, GM bought out the electric street car industry and ceremoniously burned the cars by the hundreds so they could replace them with their diesel busses.

"The EV-1 has met a similar fate and under GM management the program was doomed from the start.

"By limiting production to a few hundred vehicles, stocking a limited supply of parts, offering the car in only two markets, and employing a half-hearted marketing campaign, GM's self-fulfilling prophesy of lackluster sales came to fruition.

"Creating a minimal market and stifling its growth was just one part of the scheme to kill the EV-1. Part 2 of the scheme was to pressure and sue the California Air Resources Board for instituting the EV mandate, spending millions on savvy lawyers to take on the CARB. To combat air pollution in California the CARB instituted a mandate in the 90s where 5 percent of vehicles sold should be electric. Although GM was positioned well to meet the mandate with the EV-1 they pursued another course of action by killing the car completely, citing weak sales.

"Waiting lists tell another story about the increasing demand GM ignored. There were thousands of prospective customers on waiting lists for EV-1s from all over the country. GM officials deny these lists exist since upper management didn't authorize keeping a master list.

"GM's ultimate plan to limit the EV market, deny the existence of waiting lists, and then pressure legislators with lawsuits ultimately put them into a position where they could prove there was no need for the EV-1 or EVs for that matter.

"Although GM could be accused of automotive genocide by crushing the EV-1, GM doesn't deserve credit for creating the car. That credit goes to AeroVironment who designed the original EV-1, which was known as the Impact, and by Alan Coconni of AC Propulsion.

"Automotive consumers would think if GM won't embrace EVs perhaps they would compromise with gas-electric hybrids. But once again, GM in its dinosaur thinking, continues to pump out gas guzzling dinosaurs like the Hummer totally ignoring the small car market.

"Toyota has produced the Prius hybrid for seven years with its 3rd generation Prius now in production. GM contends the hybrid is not profitable. However, demand for the Prius has increased by the thousands and Toyota is making a profit on the car. Where is GM's hybrid? That's years away and if they do build a hybrid it will be a converted SUV, not a purpose-built hybrid.

"Proponents of GM will say the company is developing hydrogen technology such as the Hy-Wire for the future. In reality, hydrogen is 'look over there' technology and a stalling tactic used by industry and the Bush administration to avoid near term solutions

such as EVs.

"The simple fact is, EVs and hybrids are an intrusive technology and a threat to US automakers, the oil industry and friends of the present administration. The EV-1 wasn't a failure but a victim of an industry still stuck in the dinosaur age."

The anti-hybrid

On January 6 CNN senior writer Chris Isadore, covering the North American International Auto Show, reported on the remarks of Robert Lutz, GM's vice chairman of product development. Said Lutz, "It just doesn't make environmental or economic sense to try to put an expensive dual-power train system into less expensive cars which already get good mileage."

"Hybrids are an interesting curiosity and we will do some," said Lutz. "But do they make sense at $1.50 a gallon? No, they do not."

Instead of trying to catch Toyota, GM has elected to produce (if it really does it) a variety of pickup and SUVs with half-baked "hybrid" drive trains. These vehicles, Lutz insists, will save more fuel and prevent more pollution than would smaller vehicles.

This may or may not be true, but larger vehicles waste fuel for a reason that has nothing to do with their having a conventional or hybrid drive train: it takes more energy to move them. They're physically large, which means lots of frontal area, hence lots of aerodynamic drag. On top of that, they're poorly streamlined. Combine a big frontal area with a high drag coefficient and you lose a great amount of energy just moving air, and there is no way in the world that you can get any of that back with regenerative braking.

Of course Toyota is introducing a hybrid pickup (as well as a hybrid Lexus), but only after proving that it could do a fine job with a regular (and not too expensive) passenger car—a passenger car that just happened to win Car of the Year.

Forgetting about cars

One reason that GM is concentrating on SUVs and pickups is that they have concentrated on them so much in recent years that they have dropped the ball on cars—to the point that they are no longer competitive with the Japanese. In another interview, Bob Lutz admitted as much: "We've been taking the cars for granted and we got passed by the Japanese."

And why has GM ignored cars? Because they make a few hundred dollars on each one, compared to the few thousand on each pickup and SUV. Perhaps GM should become a truck company and just cede the car market to people who care about it.

Of course, the Japanese and the Germans have noticed that pickups and SUVs are very profitable, and the former have come out with models that are as good or better than anything the General makes. So in the end, GM will show us that you can be fat, dumb and happy for only so long. Then you die.

FEBRUARY SPEAKER SET

Don't forget the guest speaker for the February meeting. Frank Copelin, who sells Priuses for Conicelli Toyota in Conshohocken. He will bring a 2004 Prius and give a talk and demonstration rides. The meeting promises to be a winner, so be sure to get there on time.

NEWS UPDATE

Honda plans new hybrids

Honda Motor Co. has announced plans to introduce a V6-powered hybrid Accord using Honda's Integrated Motor Assist (IMA) hybrid system in combination with Variable Cylinder Management (VCM) technology. Honda claims V6 performance with fuel economy equivalent to a four-cylinder Civic. VCM allows for the deactivation of three of the engine's six cylinders under certain conditions—such as highway cruising—to deliver greater fuel efficiency.

Fuel Cell Stack

Honda has also developed its own fuel cell stack and will introduce a version of its FCX fuel cell vehicle powered by the Honda FC Stack beginning in calendar year 2005.

This advanced new fuel cell stack is a remarkably compact unit that delivers higher performance with increased range and fuel efficiency and is designed to operate at temperatures as low as -20ºC (-4ºF).

Honda is conducting trials of the FC Stack,

including public road evaluations in the U.S. and Japan, in preparation for its introduction next year in the Honda FCX.

Hybrid Lexus set

Lexus has announced a hybrid. Called the RX 400h, it will be powered by a V6 Hybrid Synergy Drive system that claims to combine sub-eight second zero-to-sixty acceleration with fuel efficiency equivalent to the current average for a four-cylinder compact sedan. The RX 400h will also be rated as a Super Ultra Low Emission Vehicle (SULEV).

The RX 400h will also have VDM, or Vehicle Dynamic Management, which monitors a variety of sensors and is supposed to anticipate the onset of a vehicle skid or slide and then help correct the situation with a combination of braking and throttle control.

The 400h hybrid powertrain uses the same 3.3-liter V6 engine found in the RX 330 in a "full hybrid" configuration, meaning that it can run in separate gas or electric modes, as well as a mode that combines power from both. Peak system output will be approximately 270 hp, with fuel economy "significantly better" than 27.6 mpg. An optional all-wheel-drive will use a rear-drive electric motor. A continuously-variable transmission (ECVT) will also be featured.

A hybrid from Mercedes

DaimlerChrysler has announced a hybrid luxury SUV. Called the Vision Grand Sports Tourer, it uses the V8 diesel engine from the S-Class (184 kW/250 hp) and an electric motor (50 kW) for a total of 234 kW, to give a zero to 100 km/h time of 6.6 seconds. The car's top speed is electronically limited to 250 km/h. There's a 1.5 kWh 270-V nickel metal hydride battery in the rear, and low-speed operation can be all-electric. The system claims to increase fuel economy by 20 percent on the European driving cycle, from the 30 mpg of a standard Mercedes SUV to 33 mpg. Hardly seems worth it.

U.S. and Japan to cooperate on fuel cells

An AP story dated January 8 reports that the United States and Japan have agreed to pursue pre-competitive research and development in fuel cell and hydrogen technologies.

Tokyo and Washington will bring together appropriate officials and technical experts to participate in workshops and seminars in the area of fuel cell and hydrogen production, storage and transport technologies. The two countries will also exchange experts and share information on technological programs and developments in such areas, including recommendations for common codes, standards and regulations and requirements to develop hydrogen fueling infrastructure.

DOE to develop hydrogen-fueled three-wheeled vehicles for India

The U.S. Department of Energy is implementing a project that will introduce hydrogen-fueled three-wheeled vehicles into India. With support from the U.S. Agency for International Development (USAID), one of India's largest automobile manufacturers—Mahindra and Mahindra Limited—will select two of its popular lightweight vehicles for conversion to hydrogen fuel. Michigan-based Energy Conversion Devices Inc. will convert the vehicles' engines to run on hydrogen and will add hydrogen storage systems that use its proprietary metal hydrides, which store the hydrogen in a solid chemical form. One of the vehicles will then be returned to India, and one will remain in the U.S. for testing.

DOE is interested in the project because it will test an alternative fuel system under congested traffic conditions where transportation pollution is severe. It could encourage the use of hydrogen fuels in developing countries, introduce key U.S. technologies to the Asian market, and hasten the development of hydrogen-fueled transportation in the United States.

Want more on hydrogen?

For a good article on what Mazda is doing

with hydrogen-powered cars (burning the hydrogen, rather than running it into a fuel cell) see Green Car Journal at http://www.greencar.com/mazda_article1.cfm

A fuel-cell Jeep?

DaimlerChrysler showed off its Jeep Treo fuel-cell concept car at the North American International Auto show.

First shown at the Tokyo Motor Show in October, the Treo has room for three passengers or 'two-plus-gear' and features an electric drive powertrain that provides full-time four-wheel drive capability and can be powered by a fuel cell.

Solar energy for the poor of India

BP Solar USA is donating more than $1 million worth of solar modules to BASE (Basel Agency for Sustainable Energy), who in turn are dispatching them to rural and semi-rural areas of India where over 60 per cent of the population is without electricity.

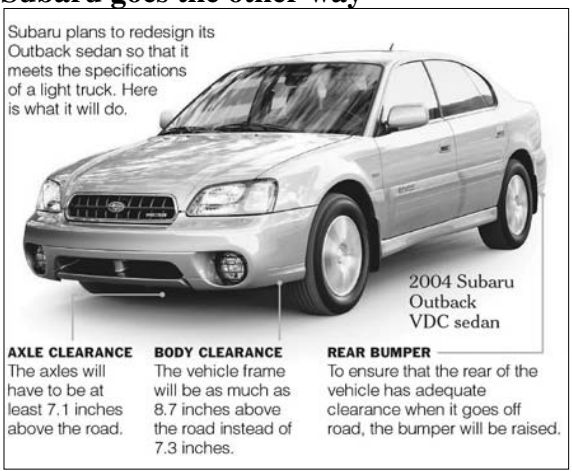
The solar systems will be used for water pumping, lighting and for powering telecommunications services including cyber cafes.

The solar photovoltaic modules provide 635 kilowatts and are equivalent to 10 per cent of India's current solar market. Some of the panels will be sold to paying customers by the Syndicate Bank of India, which has established schemes for promoting solar pumping and lighting in rural areas. The revenues generated along with other donations and grants will in turn be used to fund the installation of the remaining panels in poor communities where customers will pay an affordable fee for the service.

Lithium Technology gets Army contract for ultrafast charging battery system

Lithium Technology Corp. of Plymouth Meeting, PA has received a Small Business Innovative Research (SBIR) Phase I contract from the US Army Communications-Electronics Command (CECOM) for the development of an Ultrafast Charging Lithium Battery System. Under the contract, LTC will develop a high-power 14.4-Volt lithium ion battery system that will be used to rapidly charge smaller battery packs in the field and will itself be capable of recharging quickly from another power supply such as a vehicle-mounted gas-fueled generator. The technology reduces charge times to 30 minutes or less from the typical 2 plus hours required to charge standard lithium ion batteries.

Subaru goes the other way



The New York Times reports that Subaru is making changes to its Outback sedan and wagon to meet the specifications of a light truck, mostly to avoid tougher fuel economy and air pollution standards for cars.

DOE regulations require a CAFE (corporate average fuel economy) of 21.2 mpg for light trucks and 27.5 mpg for cars.

Changes include increasing ground clearance by about an inch and a half.

NJ utility to cut CO_2 emissions

The Philadelphia Inquirer reports that Public Service Enterprise Group (PSEG), owner of New Jersey's largest public utility, plans to reduce it carbon dioxide emissions by 18 percent from 2000 levels by 2009. Plans call for adding cleaner-burning generators and retiring older, less-efficient units.

Report: Diesel doesn't save money

Reuters recently reported on a study by the Union of Concerned Scientists that finds that gasoline-powered vehicles and hybrid cars will be more cost-effective than diesel engines for the foreseeable future for cutting U.S. oil use and global warming.

In its report, the group used detailed modeling to examine for the first time how diesel and gasoline vehicles competed among a variety of cars and trucks, applying improved engines and other conventional fuel-saving technologies that could be implemented today, as well as advanced and hybrid technologies that could be implemented within the next 10 to 15 years.

Improved diesel and gasoline vehicles could reduce oil use compared to today's vehicles by as much as 40 percent using conventional technology and hybrid-electrics could cut oil use by as much as 50 percent, according to the report. The problem is that such diesel vehicles would cost more than gasoline or hybrid ones, negating any economic benefits from the diesel's better fuel mileage.

A USEFUL COMPUTER TIP

Due to an error in security settings, the EEVC mailbox has been refusing most e-mail. That has been corrected. As compensation for any inconvenience, we've decided to pass along the following tip on getting rid of e-mail Spam.—ed.

Spam is a perennial problem to most e-mail users, but if you use Outlook Express on a Windows machine, there's something you can do to stop almost all of it.

Block the bad senders

Spammers almost always falsify their return addresses, so it does no good to use the Create Rule From Message function under Messages. That just blocks that false address, which accomplishes nothing. Instead, do as follows:

1. When a piece of Spam shows up in your inbox, right-click it (without opening it) and select Properties. Click the Details tab.
2. Scroll down to the line that begins with "From." For a normal e-mail (say one from a person) you'll see something like "name@isp.com," where "name" is the name of the sender and "isp.com" is the sender's Internet service provider. For example, e-mail from the EEVC would have "easternev @aol.com." If it comes from a company (either a legitimate company or a Spammer) you may see something like "name@xx.yy.zz.com" You can take advantage of this. The last part, "zz.com" is the Spammer's ISP, and no matter how many false addresses they put in front, that part won't change.
3. Highlight the "zz.com" and copy it using CNTL C.
4. Click OK or Cancel to close the info box and go to Tools, then Message Rules, then Blocked Senders List.
5. Click Add, then use CNTL V to paste in the material you copied.
6. OK your way back out.

This method takes advantage of the fact that only a few ISPs account for most Spam. Block the ISP and you block all the Spammers who use it. Repeat it for each piece of Spam that arrives and you'll end up blocking most Spam before it gets in. Just be careful when you do it to avoid blocking legitimate ISPs. For example, some Spam comes with an AOL address, some from Yahoo, and some from Hotmail. You'll have to decide whether you want to block all mail from these ISPs.

Next month: More on blocking Spam.

COMING EVENTS

Hybrid Vehicles Symposium
Jan 28-29, San Diego, CA. Call Nancy Eiben, 724-772-8525

National Biodiesel Conference and Expo
Feb 1-4, Palm Springs, CA. Call the National Biodiesel Board, 800-841-5849.

Fuel Cell Vehicles—the Next Step Toward Commercialization and **Facets of Implementing a Hydrogen Economy**
Feb 18-19, Sacramento, CA. Call Diane Applegate, 724-772-7115.

4th Annual Clean Heavy-Duty Vehicles Conference
Feb 25-27, 2004, Rancho Mirage, CA. Go to www.weststart.org.

SAE 2004 World Congress
Mar 8-11, Detroit. Call Tim Mellon at 724-

772-7162 or visit www.sae.org.

National AFV Day Odyssey 2004
Apr 2, multiple nationwide locations. Call NAFTC/West Virginia University, 304-293-7882/6944.

Earth Technologies Forum
Apr 13-15, Washington, DC. Call 703-807-4052.

2004 Future Car Congress
June 27-30, 2004, Washington, DC. Call SAE at 724-772-4006.

World Renewable Energy Conference VIII
Aug 28-Sep 3 Denver, CO. Call Robert Noun, NREL, 303-275-3062

MEETING SCHEDULE

Meetings are held in Room 35, Plymouth-Whitemarsh High School, 201 East Germantown Pike in Plymouth Meeting, PA, and begin at 7:00 p.m.

February 11
Frank Copelin, who sells Priuses, will speak.

March 10

April 14

May 12

June 9

ADVERTISEMENTS

For Sale

1981 South Coast Technologies converted Volkswagen hatchback. Four-speed stick shift with clutch, shunt field controlled Siemens motor, 18 six Volt Batteries (108 V). Approx 500 miles on new battery set.

Lester charger, current PA inspection, tow package, many spare parts.

Seen at many EEVC Events
$2500
David Patterson
215 493-0806

For Sale

1975 CitiCar, excellent condition, completely refurbished a few years ago, shown at the EV display at Pocono Speedway. Maroon body, new top, upholstery, tires. Will go close to 50 mph. Batteries all there, but have not been charged in a while. Complete service manual included, plus an issue of Popular Mechanics with an article about the start of the CitiCar. $2500 or best offer.

Henry McCool
RR 6 box 6122
Greenview Drive
Stroudsburg, PA 18360

For Sale

1988 S10 electric pickup in "Show" Condition. BASF paint (blue/green changes color as you move around vehicle). top quality Cooper tires; five leaf springs; 20 HP Advanced DC Motor; 110 V, On-board charger and separate Lester 220V; All new Trojan Batteries. Superb condition. Runs and looks very well.

Will consider delivering. Someone will get a great e-truck as I am moving.

Contact Don McMann, jricha1@rochester.rr.com, or (315) 374-7862 or Joan at (315) 539 3882.