



# CONNECTIONS

## New England Electric Auto Association Newsletter

### From the President

Spring is in the air, and unfortunately so is our water. With rain and snow levels at their lowest in over 100 years, this Summer may prove to be the driest yet. Conservation is going to be the rule this year and we will likely expect to see water use restrictions and higher fuel costs as a result. The use of EVs can help reduce global warming by being recharged with stored solar electric power or during off-peak periods when commercial power demand is low. Check fluid levels in your batteries often as higher battery temperatures will promote the evaporation of water. Free hydrometers will be available to all members who attend meetings and for those who are unable to attend and would like one, please contact me and I will send you one in the mail.



### Officers

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### Leominster Center for Technical Education - EV Program

Among our guests at the Feb. meeting were two students from this program, Scott and Todd Schofield, who are cousins. The program just started this year as an after school venture, exploring the realm of alternative transportation. The main project is in design and planning stages now, the donor vehicle being a Ford Ranger pickup. This will be a plug in vehicle conversion at 120-144V. At present the gas guzzling paraphenalia has been mostly removed and the focus is on vehicle issues such as brakes. Later on, all stages of this conversion will be done by Leominster students including welding of the battery boxes, suspension changes as necessary and of course, electricals. All participants will have equal understanding of all issues both before they happen and during their implementation. The goal of this program is to have a plug in EV at least equal to any of ours in parameters and performance, possibly superior, and hopefully to enter her into the Tour de Sol, which will swing this way next year.

Interviewing our guests, both Scott and Todd joined this program as a challenge to get a leg up on what promises to be a big part of the future of automotive technology. They both see new skills and knowledge here, far apart from what they are presently learning in normal class and shop as future automotive mechtechs. Of course, before they came to our meeting (driven electrically by member Eric Klatt) both had seen only one EV. But the word 'awesome' seemed to pop up a lot in conversation as they explored underhood areas of the several EV's on the premises.

Presently, the course happens only one afternoon a week. But as time goes on and materials start to come in, they will be getting more into 'hands on' issues - getting a little greasy, and making up cabling, welding boxes, lightening the vehicle itself, and doing all that good stuff that we know goes into a conversion. Their own automotive shop instructor is involved, as well as having assistance by both member Eric Klatt who himself hails from Leominster, and our able President and Guru Extrodinaire, Tony Ascrizzi. With success and growing student interest, this much needed program should continue beyond the present course year. As to the project, this will be a good vehicle, a safe vehicle, and another example for the public to watch closely as a demonstration that plug-in EV technology is viable, reliable, and here to stay.

### TIDBITS

Toyota will make available the RAV-4 EV to a limited market this year. If sales are successful, it may be available Nationwide. Cost? About \$40,000.

The EAA web site is: [www.EAAEV.ORG](http://www.EAAEV.ORG)  
 Our own NEEAA web site is:  
[www.NEEAA.ORG](http://www.NEEAA.ORG)

To encourage greater usage of EVs by increasing confidence in being able to obtain an opportunity charge away from home, (even if just for emergency use) please consider submitting your name and information for inclusion on our web page to TonyAscrizzi@juno.com.

Free Hydrometers

Leominster CTE  
EV Program

Meeting Highlights  
from Jan. and Feb.

Great Deals on  
Batteries

Free NEEAA  
Window Stickers

Free NEEAA  
Jackets

March 2002

## Meeting Jan '02

This was a relatively small meeting, we had 10 members. Outstanding issue, a surprise that our educational program of free logo jackets had such a small response that it did not come up to the minimum requirement of the jacket manufacturer. Therefore, it was suggested and voted on that the offer be repeated in the next newsletter. See form on last page. A new toy was brought in by Secretary Dave Robie, one of those \$79.95 Bldg 19 scooters. There was a description of what's in it, what's right and what's wrong with it, and a comment by Dave that if any of these show up in the trash in the future, pick them, he could put a use to 'em which is not necessarily 'scooting'. A couple members rode it at meetings end and nobody fell off. Meeting adjourned at 4:15.

Respectfully submitted, Dave Robie, Secretary

**Heard at the meeting;** Vice President Bob Rice is nonchalantly doing about 12,000 miles a year in a plug in EV. Treasurer Brian Matheny is doing ALL of his miles with a plug-in, as he does not own a fuel burning vehicle. Secretary Dave Robie is doing well over half his miles in one, and President Tony, of course, is splitting his own miles with about ¾ of them driving a plug in, the rest in the Prius hybrid. (Editors comment; There are others in the club doing serious mileage with fullsize plug-in vehicles but were not present.) (Second comment; Considering that the powers that be in government have spent untold millions of dollars doing studies to find out whether or not plug ins are viable transportation, and are still doing these studies, it seems to this writer that they could have studied us NEEAA people for very little or even no cost - but that isn't pork barrel or politics, it's only reality).

Member Jack Gretta gave a description of his own experiments in the 70's with compressed natural gas in his own vehicle, a model A Ford. This was 'dual fuel', still able to burn petrol or switch to gas with gas injected below the throttle. She would do 60 nicely with this home made setup.

Question was asked of a member who is driving an early 'pre production' Solectria Force. 'How's the maintenance on her?' Answer, 'daily'. Seems like both design and construction have come a long way since these 'radical' vehicles were built. Maint now on plug-ins seems to happen with the donor vehicle part, not the electric part of it.

Discussion moved through battery boxes to weight placement and adequate support for the pack under worse than expected conditions, for a longer than anticipated time. Yes, bed iron and coathangers will work but are not enough. That pack is heavy!

Member Jim Mell had a video of his bigframe GE Electrak plowing snow, using the stock plow and electric plow lift. Jim did not need chains, these 1000 lb tractors really grip the ground. Both President Tony and Sec'y Dave have chains on their bigframe snow machines both due to the hill climbing required on their driveways and all around prudence. We wouldn't want the neighbors seeing our yard EV's 'stuck'!

## Meeting Feb '02

More people here as the weather cooperated, we had 17 members and guests. 2 members came in EV's, including passengers from the Leominster HS EV program (see article). There was a large interest in both of these, hoods up and being discussed and ogled by all.

One of these vehicles, of course, was plugged in to charge. As Mass Electric saw fit to do some repairs on the street's wiring at that particular time, there was no electric power at the meeting. Lights we had, due to Tony's soon to be completed solar system but heat, coffee, or opportunity charging we didn't - so there was an issue of how far home one member was going to get without stopping for a second opportunity charge. All plugged in and no place to go. C'est la Vie.

Among the new people was Wayde C. Lodor, P.E of Leominster MA, a professional electrical engineer who took copious notes of both the meeting and his discussion with various members - with particular interest in how an EV conversion should be built, and issues regarding the donor vehicle as demonstrated by President Tony. Also, we had 2 students from Leominster, both attending the embryonic 'electric Vehicle' Technology class (see article). Meeting adjourned at 4:30

Respectfully submitted, Dave Robie, Secretary

**Heard at the meeting;** Pack longevity; Treasurer Brian Matheny reports that his pack lasted 22,000 miles and could have done more but he requires longest possible range, had to change it for that reason. Cost of pack amortization worked out to 8c/mile. Brian's use, also, is 'non-optimal'. That is, many short trips of varying lengths. Optimal would be regular commuting, say to work or a rail station. Bottom line is that you will get 600 good charge discharge cycles out of a brand new flooded lead acid pack no matter what the state of discharge is when you plug her in.

There was also a discussion on taking care of a pack. Battery manufacturers all agree that overcharging shortens battery lifespan. However, as seen by EV owners and drivers this percentage of shortening is acceptable, much preferable to going in the other direction, that is, undercharging and taking the chance of driving the pack down to an abnormally low voltage or even worse, reversing an individual cell's polarity - which then, of course, that cell is toast or close to it.

Meeting as usual was in the format of 'several small groups.' Among the subjects covered was the 'pie in the sky' thought of manufacturing a hybrid EV which would also function as an emergency generator for house power. Not such a bad idea, seeing as it would add relatively little to the manufacturing cost of a vehicle. But would add to the weight etc. But think of the advertising/public relations value. Hmmmmmmm. There are 'computer type' UPS power supplies out there now that could be modified to run off our 120-144 volt plug-in vehicles now and deliver as much as 1500 watts 60 HZ AC. But for how long? Would it be worth it? Anyone out there feel like playing with this? At present, the Dodge 'Contractor's special' fuel burner pickup has a built in 120-220 generator and is rated at 33KWH/gal running as a generator.

President Tony showed all his partially completed solar system. All batteries are in racks and wired not for just standby power, but for 100% of the lights in the shop and meeting area - and as time goes on will provide all the lights in the house. Lighting, of course, figures to consume most of the power in an average house. So payback will happen with this system, unlike 'emergency only' systems which do not pay back at all. At present, charging is with a regular charger. When weather and time permits, up go the panels on a roof that just happens by chance to be placed properly for south exposure and declination.

We also heard of a badly busted Lectric Leopard which may be of interest to someone looking to do a total restoration of a 70's EV. If interested, call President Tony.

## ANNOUNCING (TADA TADA)

Our latest window sticker for your EV. Green lettering on white, this gives our logo, an environmental message and our website and phone number. This handsome inside sticker tells people you're 'connected'. A free member service, just drop into our regular monthly meeting and pick one up.

## BUY, SELL, SWAP

### **Citicar 48V:**

Needs cosmetics and F/R contactor but has rebuilt brakes, motor, brand new radials. Restoration was almost complete when I acquired the Ford Courier last July and dropped out of it. With a set of 'starter' batteries and original manuals. \$1,000 firm. I also have a **Stirling cycle 'hot air' engine kit**. All parts machined, can be assembled in an hour. Runs on dry fuel tablets or a homemade alcohol burner. Turns a 3" flywheel at up to 1000RPM. All USA components by PM Research, brand new never opened. Age range 11-99. \$79.00 plus \$5.00 ship. Interested in small steam or Stirling engines? I'm the guy. Dave Robie 414 So. Weymouth, MA. 02190 781-335-5322 or MycroftXX@Juno.com

### **Chevy S-10 Long Bed Chassis:**

Bob Rice has this rolling chassis for FREE to anyone who wants it. Delivery may be available at a modest cost. Call for details at 203-530-4942.

### **ANOTHER FREEBIE:**

All who use flooded lead acid batteries in their EV's will receive a gift at the next meeting. A midsize floating ball hydrometer. These come to us through Secretary Dave Robie and Mike Burke of Tennessee, who is into PV solar and now getting his first taste of EV land with a 12V scooter.

### **For Sale: 1992 Ford Festiva**

Brian Matheny's Festiva is for sale. It is partially completed right now. It has an ADC 9" motor, clutch coupled to the 5 speed manual transmission. Battery boxes are cut into the floor under the rear seat, and in the hatch area. Body is clean, and rust free but has some minor dents. The vehicle is available as-is or completed to your specs. Contact Brian at 508-966-3943, or E-Mail to [bmatheny@attbi.com](mailto:bmatheny@attbi.com)



### **Battery Extravaganza!**

Due to a one-time special purchase by Electric Vehicle Systems, a large quantity of 12 volt, 65Ah high-rate deep cycle sealed lead acid batteries are now available to NEEAA members for only **\$12 each**. They are group 27 and have flag terminals. All have been load tested and come with a no haggle 3 day free replacement warranty if defective. These batteries will make a great "starter set" for your EV project, solar array, trolling motor and even as a starting or supply battery in your RV. Contact Tony at Electric Vehicle Systems 508-799-5650 or E-Mail to [Batteries@electricvehiclesystems.com](mailto:Batteries@electricvehiclesystems.com) and get yours today.

### **Please write or email anything for the newsletter to:**

NEEAA newsletter c/o  
David C. Robie  
PO Box 414  
So Weymouth MA 02190 - 0003  
[Mycroftxx@juno.com](mailto:Mycroftxx@juno.com)

## NEEAA MEMBER'S JACKET PROGRAM

This chapter is doing something altogether different in regards to our educational outreach. By attending membership decision, each paid up member will receive, at no cost to him/her, one jacket. A 3- season medium weight with our NEEAA logo on it, the name of the club, our web address and your name. Member's name (if desired), can be embroidered on the front of the jacket in iridescent orange lettering. All you have to do is fill out the form below and mail it in. Again, this is free to you as a thank you for your continued support and interest in being part of NEEAA.

Imagine how we would look wearing our NEEAA jackets at an Event where several members are in attendance, separately or together. The ham shows, MIT flea market, car shows, auto race events, Tour de Sol etc. These places are where people interested in electric vehicles are apt to congregate, most often without a clue that we, NEEAA exists. And those of you already driving EV's are apt to get more attention drawn to your vehicle, and more questions to answer. We cry for educational opportunities. Here is one every member can wear. Again, freeeeeeeee.



-----ORDER FORM-----

Please Print

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Worcester, MA 01605-3315

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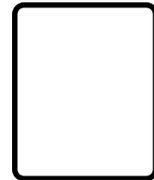
Please note....

Meetings are held on the 2nd  
Saturday of every month at 2:00 PM

at 34 Paine St. Worcester, MA. 01605. Questions?  
Call 508-799-5650 or 508-826-3471.



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